

TA-A77E/D709E

SERVICE MANUAL REVISED

AEP Model
UK Model

TA-D709E

E Model
Australian Model
Tourist Model

TA-A77E



This set is the Preamplifier
section in LBT-A77CD/
A77CDM/D709CD/D759CD.

This photo is TA-A77E.

SPECIFICATIONS

Input	Jack type	Sensitivity	Impedance
VIDEO 1/MD	Phono	245 mV	47 kohms
VIDEO 2	Phono	245 mV	47 kohms
VIDEO 3	Phono	245 mV	47 kohms
PHONO (MM)	Phono	3.3 mV	47 kohms
MIC	Phone	1 mV	10 kohms

Audio output	Jack type	Voltage	Impedance
VIDEO 1/MD	Phono	235 mV	2 kohms
VIDEO 2	Phono	235 mV	2 kohms
CENTER OUT	Phono		

Video output (phono jacks)

VIDEO 1/MD	1 Vp-p, 75 ohm unbalanced, sync negative
VIDEO 2	1 Vp-p, 75 ohm unbalanced, sync negative
MONITOR	1 Vp-p, 75 ohm unbalanced, sync negative
Frequency response	15 Hz to 20 kHz ± 0 dB
Power requirements	220—230V AC, 50/60Hz (AEP, G, IT, EE model) 240V AC, 50/60Hz (UK model) 120V/220—240V AC, adjustable with the voltage selector, 50/60Hz (A77E)
Power consumption	15 W
Mass	Approx. 3.7 kg (8 lbs 3 oz)
Dimensions	Approx. 355 x 135 x 330 mm (14 x 5 1/4 x 12 7/8 inches) (w/h/d, including projections)

Design and specifications are subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

Abbreviations

G : German model
IT : Italian model
EE : East European model

Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.

"DOLBY", the double-D symbol  and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

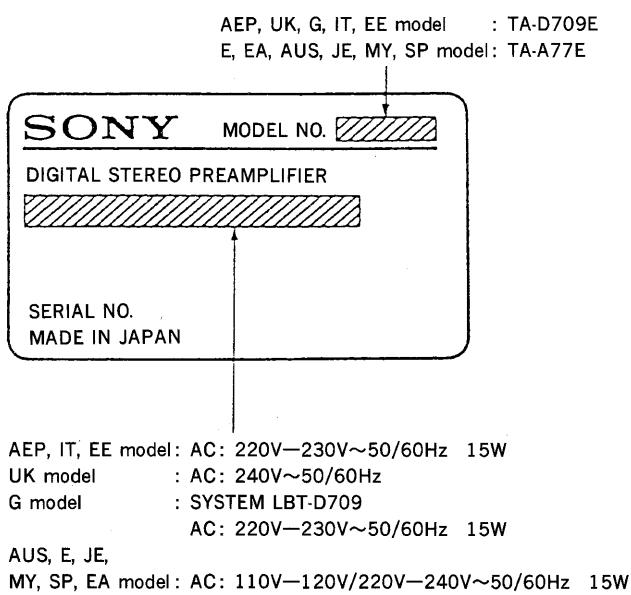
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

DIGITAL STEREO PREAMPLIFIER
SONY[®]

MODEL IDENTIFICATION

—Specification Label—



• Abbreviations

- G : German model
- IT : Italian model
- EE : East European model
- EA : Saudi Arabia model
- AUS: Australian model
- JE : Tourist model
- MY : Malaysia model
- SP : Singapore model

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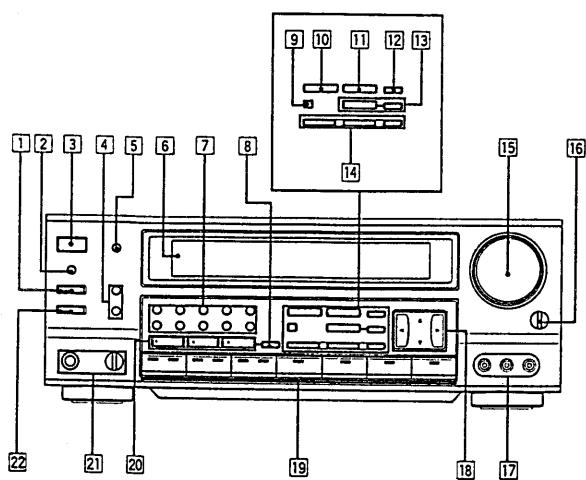
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SECTION 1

GENERAL

1-1. LOCATION OF CONTROLS

This section is extracted from
instruction manual.



- ① EFFECT button and indicator (22)
- ② KARAOKE PON button and indicator (150) (A77E only)
- ③ POWER switch (18)
- ④ Dynamic Bass System controls (FREQUENCY, LEVEL) (22)
- ⑤ DISPLAY button (136)
- ⑥ Display window
- ⑦ Numeric buttons (124, 140, 142)
- ⑧ MEMORY button (140)
- ⑨ PRO LOGIC MODE button (120)
- ⑩ EFFECT LEVEL button (124)
- ⑪ ACOUSTIC CONTROL button (122, 130, 138)
- ⑫ CHARACTER EDIT button (144)
- ⑬ SURROUND CONTROL and ON/OFF buttons (130)
- ⑭ EQUALIZER BAND, SLOPE and FLAT buttons (132, 134)
- ⑮ VOLUME control (22)
- ⑯ BALANCE control (22)
- ⑰ VIDEO 3 INPUT jacks (14)
- ⑱ CURSOR CONTROL button (122, 130, 132, 138, 144)
- ⑲ Function selectors and indicators (42)
- ⑳ SELECT 10, MORE 10 and P. FILE buttons (124, 142)
- ㉑ MIC (microphone) jack and MIC LEVEL control (152)
- ㉒ P. FUNCTION button and indicator (156)

SECTION 2 SERVICE NOTES

2-1. NOTES AT SERVICE AND INSPECTION

The parts No. suffix of the board differs from set to set.

There are four types of parts No. suffix for each board.

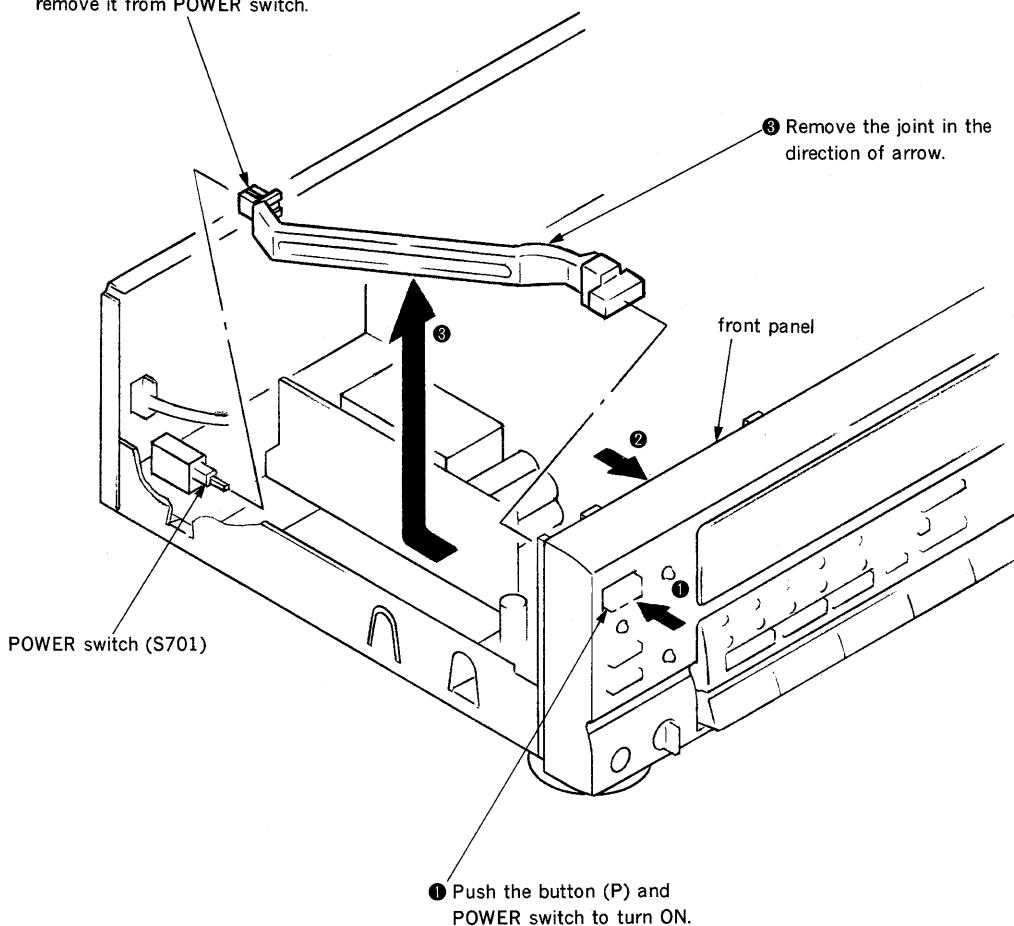
Check the type of the set according to the following list before performing service and inspection.

Board Name	The Parts No. Suffix of the Board			
	TYPE I	TYPE II	TYPE III	TYPE IV
MAIN	11	12	13	14
MICROPHONE AMPLIFIER	11	11	12	13
VOL	12	14	15	16
BALANCE	11	11	11	12
VIDEO (3)	11	11	12	12
VIDEO FUNCTION	11	11	12	12
PANEL	11	12	12	13
AU FUNCTION	11	13	14	14

Note : Follow the disassembly procedure in the numerical order given.

2-2. REMOVAL OF JOINT

② Press the joint for front panel and remove it from POWER switch.



SECTION 3 DIAGRAMS

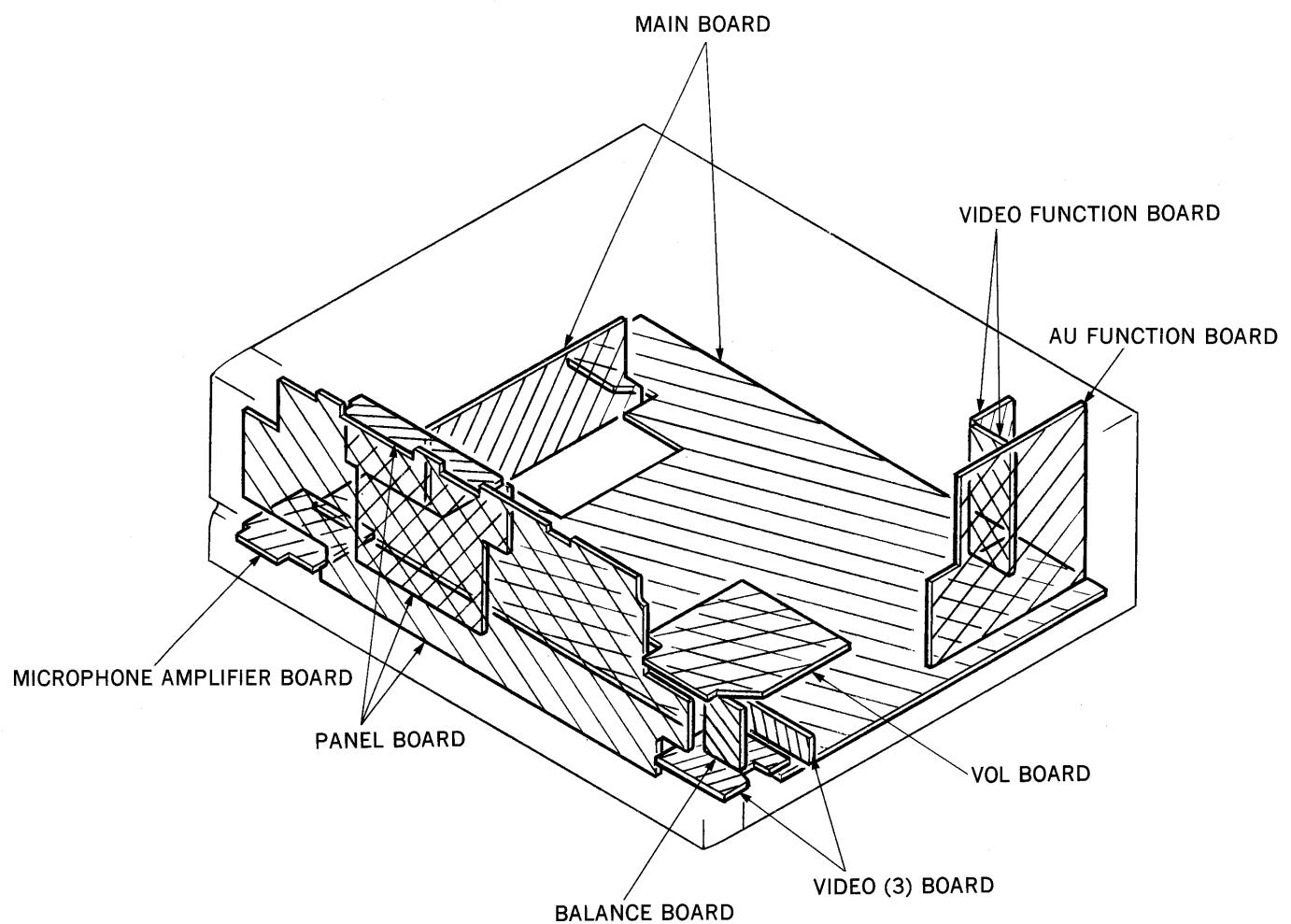
3-1. PIN DESCRIPTION

• IC202 LC83015E (Digital Signal Processor)

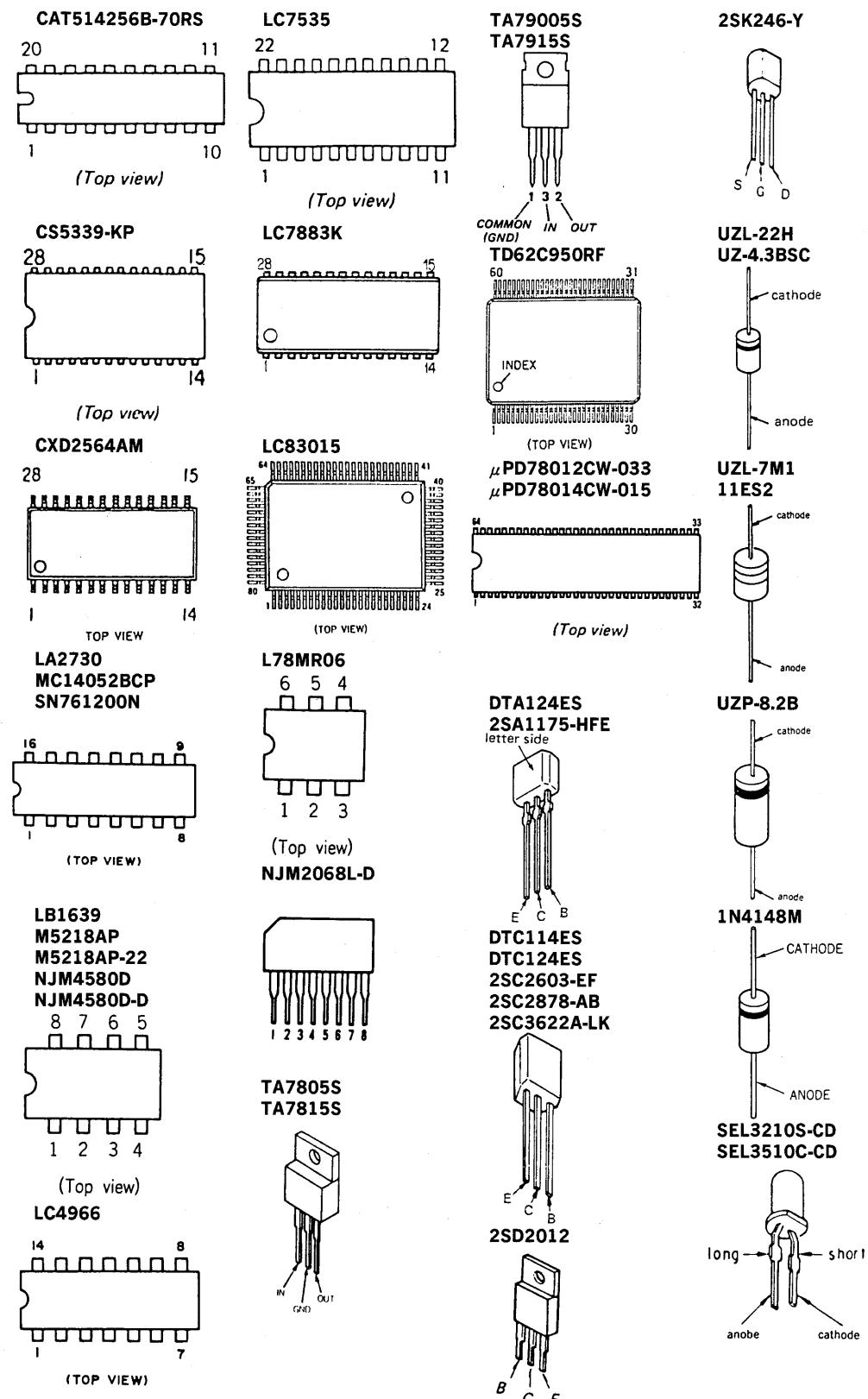
Pin No.	Pin Name	I/O	Function
1—6	P0—P5	I/O	General purpose input/output ports (with pull-up resistor)
7	ASI1	I	Audio data serial input 1 pin
8	BCK1	I	Bit clock input pin used for ASI1 input (64fs or 32fs is applied).
9	FS384I	I	384fs or 512fs input pin.
10	LRCKI	I	L/R channel identification signal input pin ("H" for Lch; "L" for Rch).
11	ASI2	I	Audio data serial input 2 pin
12	BCK2	I	Bit clock input pin for ASI2 input (64fs or 32fs is applied).
13	VDD1	—	+5V power pin
14—17	TEST1—TEST4	I	Pins used for tests, normally connected to GND.
18	VSS1	—	GND pin
19	TEST5	O	Output pin used for test, normally open.
20	<u>RAS</u>	O	RAS signal output pin used for access to external DRAM.
21	<u>CAS</u>	O	CAS signal output pin used for access to external DRAM.
22	<u>DWRT</u>	O	Data write signal output pin used for access to external memory.
23	<u>DREAD</u>	O	Data read signal output pin used for access to external memory.
24	<u>CE/CS</u>	O	Chip enable signal output pin used for activating external SRAM or pseudo SRAM.
25—32	D7—D0	I/O	Data input/output pins used for communication with external memories (D0—D3 for one DRAM; D0—D7 for two DRAMs or SRAM or pseudo SRAM).
33	VSS2	—	GND pin
34—50	A0—A16	O	External memory address output pin
51	VDD2	—	+5V power pin
52	OSC1	I	Oscillator input pin (connected to VDD or VSS when oscillator is not used).
53	OSC2	O	Oscillator output pin (open when oscillator is not used or external clock is used).
54	VSS3	—	GND pin
55	FS3840	O	384fs or 512fs output pin (through output of FS384I or self-run oscillating clock).
56	FS1920	O	192fs or 256fs output pin (1/2 frequency division output of FS3840).
57	FS1280	O	128fs output pin (1/3 or 1/4 frequency division output of FS3840).
58	FS640	O	64fs or 32fs output pin (1/2 frequency division output of FS1280 or through output of BCK1).
59	FS320	O	32fs or 16fs output pin (1/2 frequency division output of FS640).
60	LRCKO	O	1fs output pin (1/64 frequency division output of FS640 or through output of LRCKI)
61	AOWCK	O	2fs or 1fs output pin (1/32 frequency division output of FS640).
62	ASO	O	Audio data serial output 1 pin
63	AOTDF1	O	Audio data serial output 2 pin
64	AOTDF2	O	Audio data serial output 3 pin
65	SI	I	Input pin for serial data from control micro computer (8 bit data).
66	SICK	I	Input pin for serial clock for SI.
67	<u>SIRQ</u>	I	Serial input request signal input pin
68	<u>SIAK</u>	O	Output pin for indicating that serial input being executed.
69	<u>SRDY</u>	I	Input pin for ready signal indicating that serial data from control micro computer is complete.
70	SO	O	Output pin for sending serial data to control micro computer (8 bit data).
71	SOCK	I	Input pin for serial clock for SO.

Pin No.	Pin Name	I/O	Function
72	<u>SORQ</u>	I	Input pin for serial output request signal.
73	<u>SOAK</u>	O	Output pin for indicating that serial output is being executed.
74	VSS4	—	GND
75	<u>RES</u>	I	reset pin (with pull-up resistor).
76	<u>INT</u>	I	Interrupt request input pin (with pull-up resistor).
77	VDD3	—	+5V power pin
78	<u>SELC</u>	I	Select pin (with pull-down resistor) used to determine whether system clock of LS83015 is produced from FS384I (L) or from self-run oscillating clock (H).
79	<u>SACK1</u>	I	Select pin (with pull-down resistor) used to determine whether 1/3 frequency division output of FS3840 is used (L) or 1/4 frequency division output is used (H) as FS1280.
80	<u>SACK2</u>	I	Select pin (with pull-down resistor) used to determine whether each FS output clock is produced from FS384I, LRCK1 and BCK1 (L) or from self-run oscillating clock (H).

3-2. CIRCUIT BOARDS LOCATION

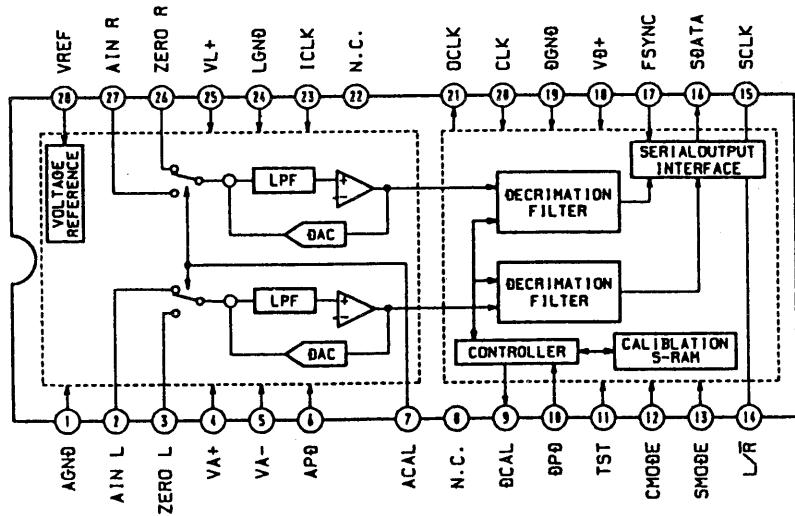


3-3. SEMICONDUCTOR LEAD LAYOUTS

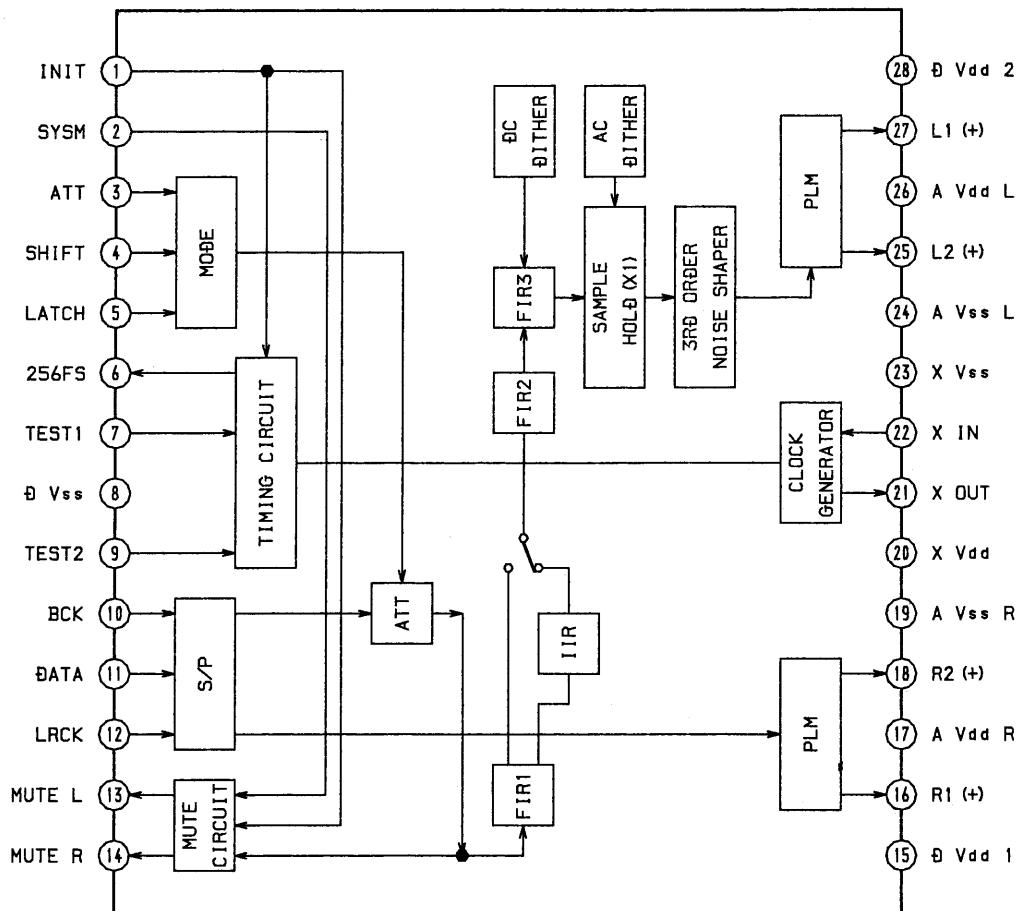


• IC Block Diagrams

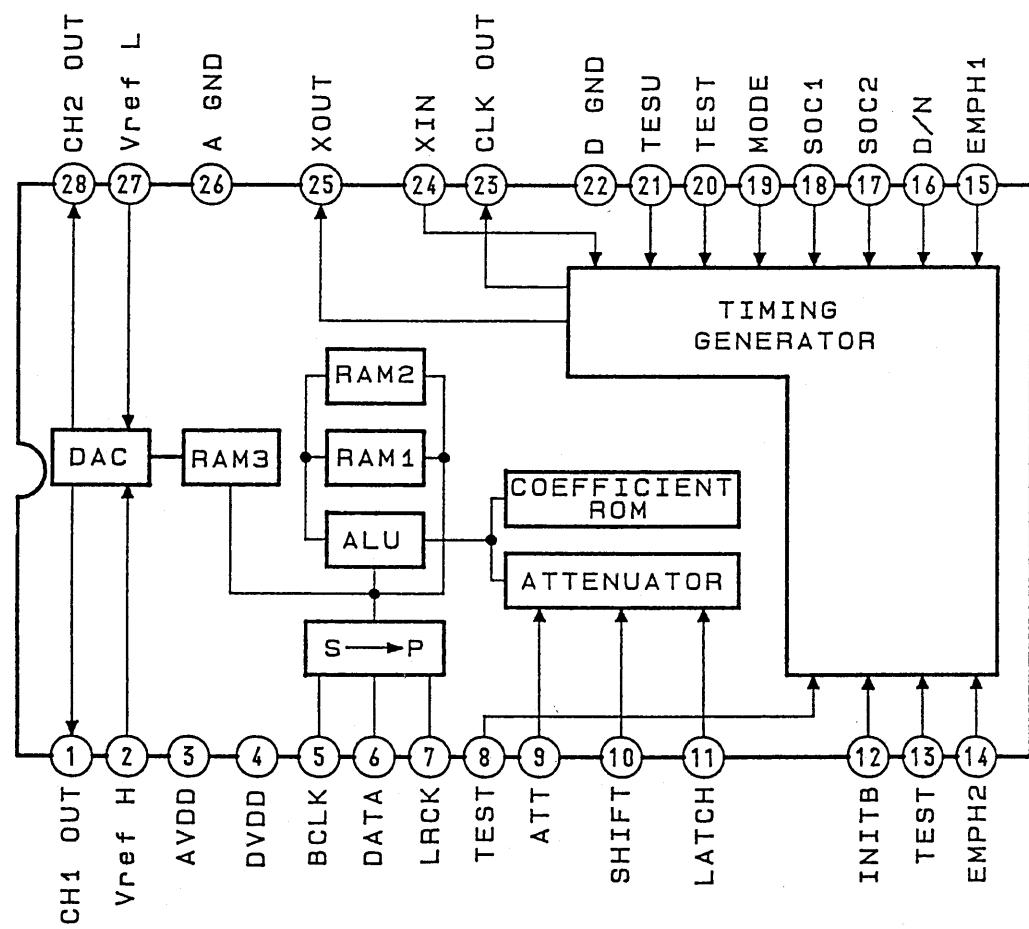
IC201 CS5339-KP



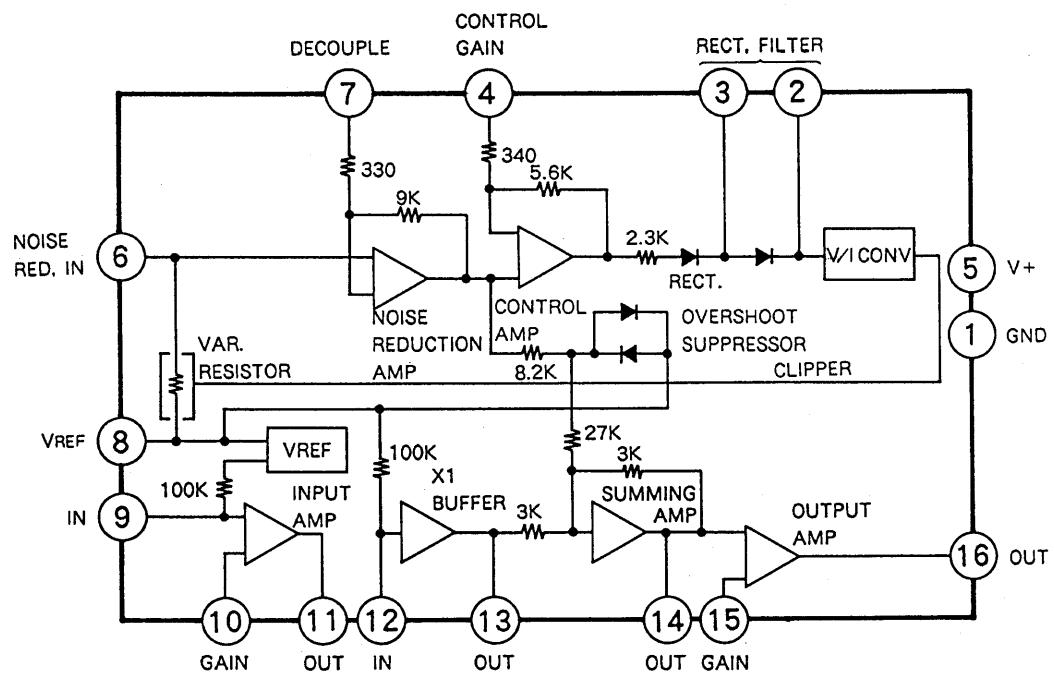
IC204 CXD2564AM



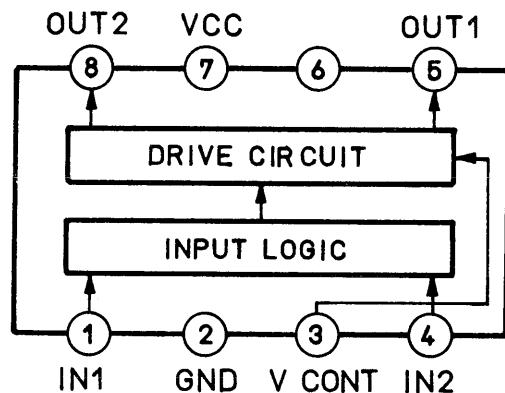
IC205 LC7883K



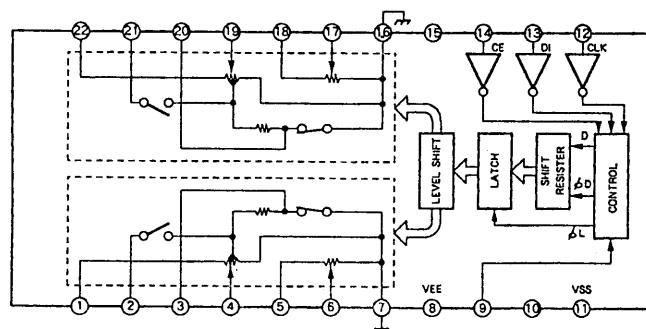
IC206 LA2730



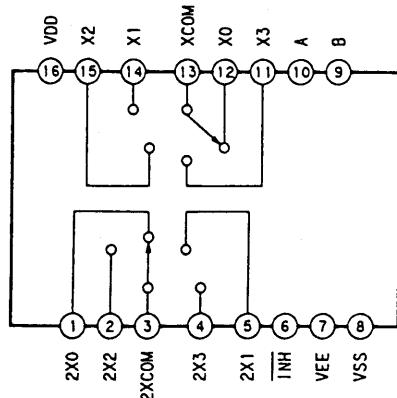
IC251 LB1639



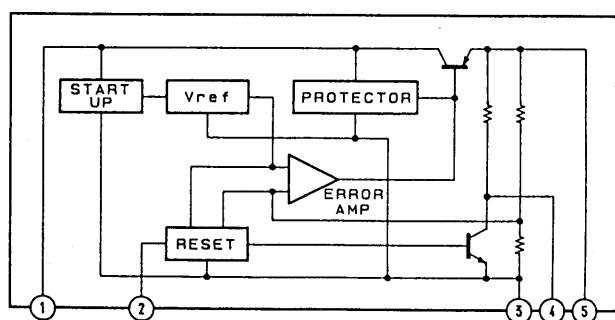
IC403 LC7535



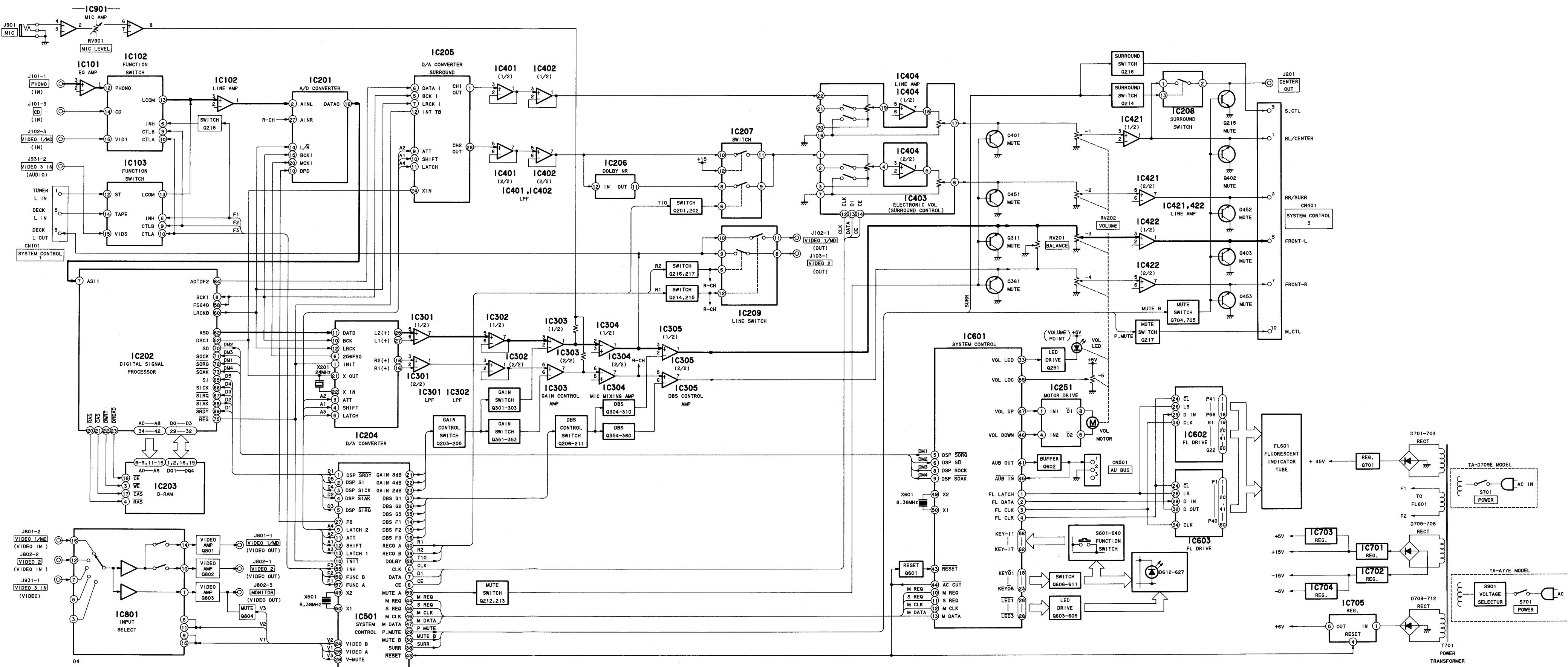
IC102, 103 MC14052 (AU FUNCTION board)



IC705 L78MR06



3-4. BLOCK DIAGRAM



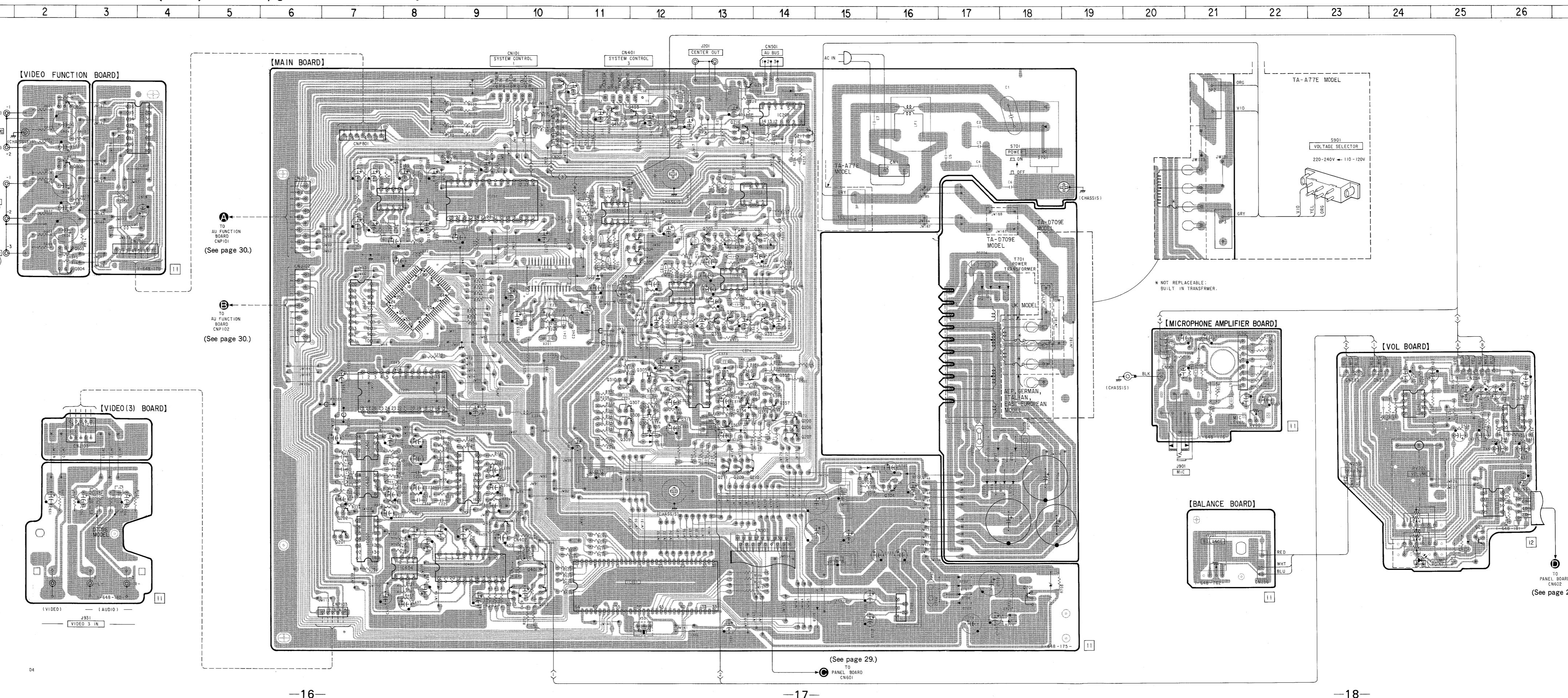
D WIRING BOARDS—MAIN SECTION (TYPE I)— • Refer to page 8 for Semiconductor Lead Layouts.

semiconductor Location

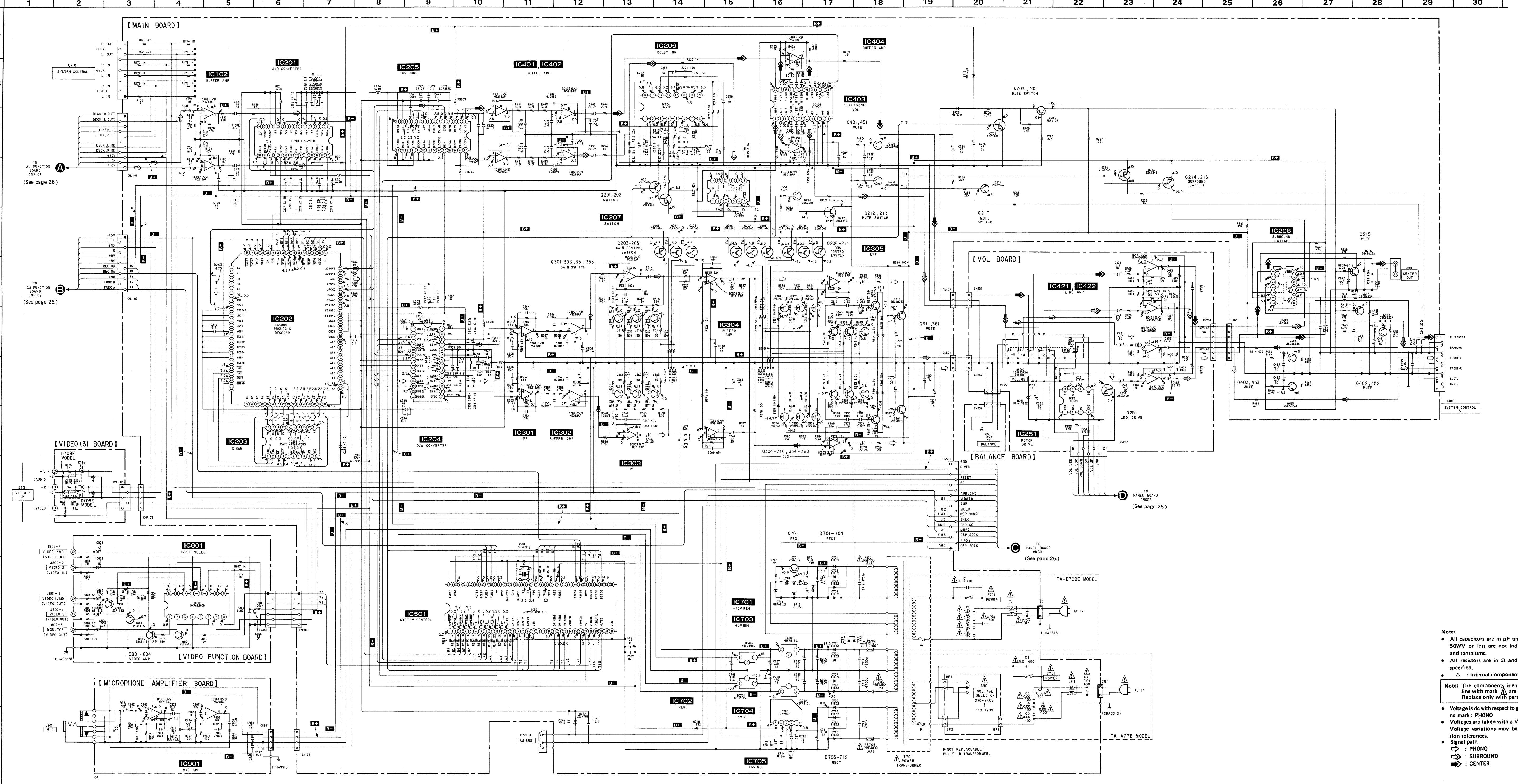
No.	Location	Ref. No.	Location
1	I-25	IC801	B-3
1	G-12	IC901	F-21
2	F-12		
3	G-12	Q201	I-7
1	G-13	Q202	H-7
2	F-13	Q203	D-12
3	G-13	Q204	D-12
1	J-17	Q205	D-12
2	J-17	Q206	G-14
3	J-17	Q207	G-14
4	J-17	Q208	G-14
5	H-17	Q209	H-13
6	H-18	Q210	H-13
7	G-17	Q211	H-13
8	G-18	Q212	J-10
9	E-17	Q213	J-10
0	E-17	Q214	B-13
1	E-17	Q215	B-13
2	E-18	Q216	B-13
3	J-18	Q217	B-14
4	J-18	Q251	I-25
5	J-14	Q301	D-14
7	H-17	Q302	D-13
8	H-17	Q303	D-13
9	H-15	Q304	G-12
0	H-16	Q305	F-12
1	J-18	Q306	G-12
2	B-14	Q307	G-11
		Q308	G-11
2	C-8	Q309	G-11
1	C-9	Q310	F-11
2	E-8	Q311	G-12
3	E-7	Q351	E-14
4	E-10	Q352	E-13
5	G-8	Q353	E-13
6	H-9	Q354	G-13
7	I-7	Q355	F-13
8	B-14	Q356	G-13
1	H-25	Q357	G-14
1	D-11	Q358	F-14
2	C-13	Q359	G-14
3	E-13	Q360	F-13
4	E-12	Q361	G-13
5	G-13	Q401	I-10
1	G-7	Q402	B-10
2	H-7	Q403	B-12
3	I-9	Q451	I-9
4	I-8	Q452	B-11
1	G-24	Q453	B-12
2	G-26	Q701	J-18
1	J-12	Q704	H-16
1	H-15	Q705	H-15
2	I-15	Q801	B-2
3	H-11	Q802	C-2
4	C-9	Q803	D-2
5	J-16	Q804	E-2

Note:

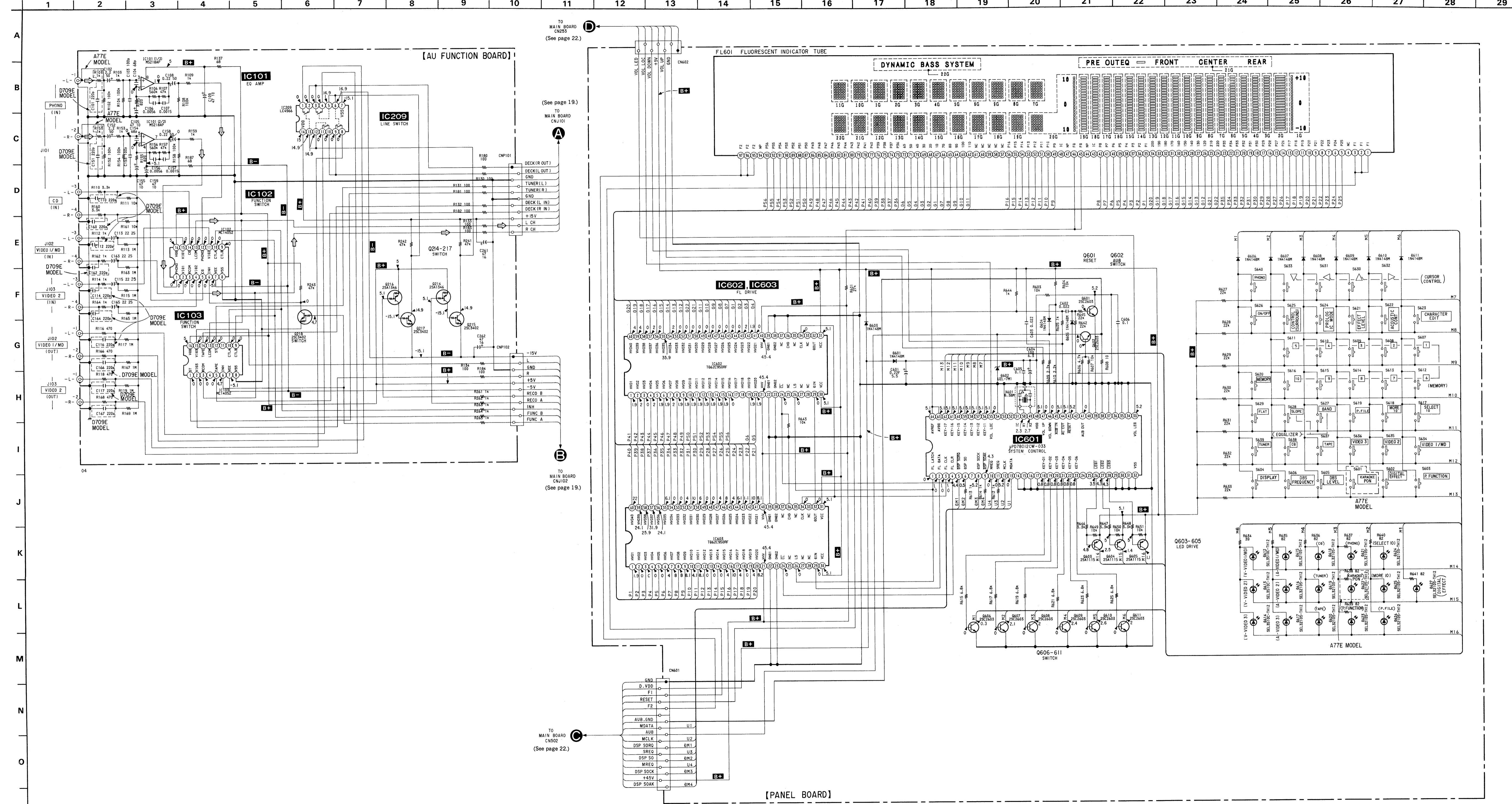
-  : parts extracted from the component side.
-  : Pattern on the side which is seen.
-  : Jumper wire connected to the ground pattern on the component side.



3-6. SCHEMATIC DIAGRAM —MAIN SECTION (TYPE I)— • Refer to page 9 for IC Block Diagrams.



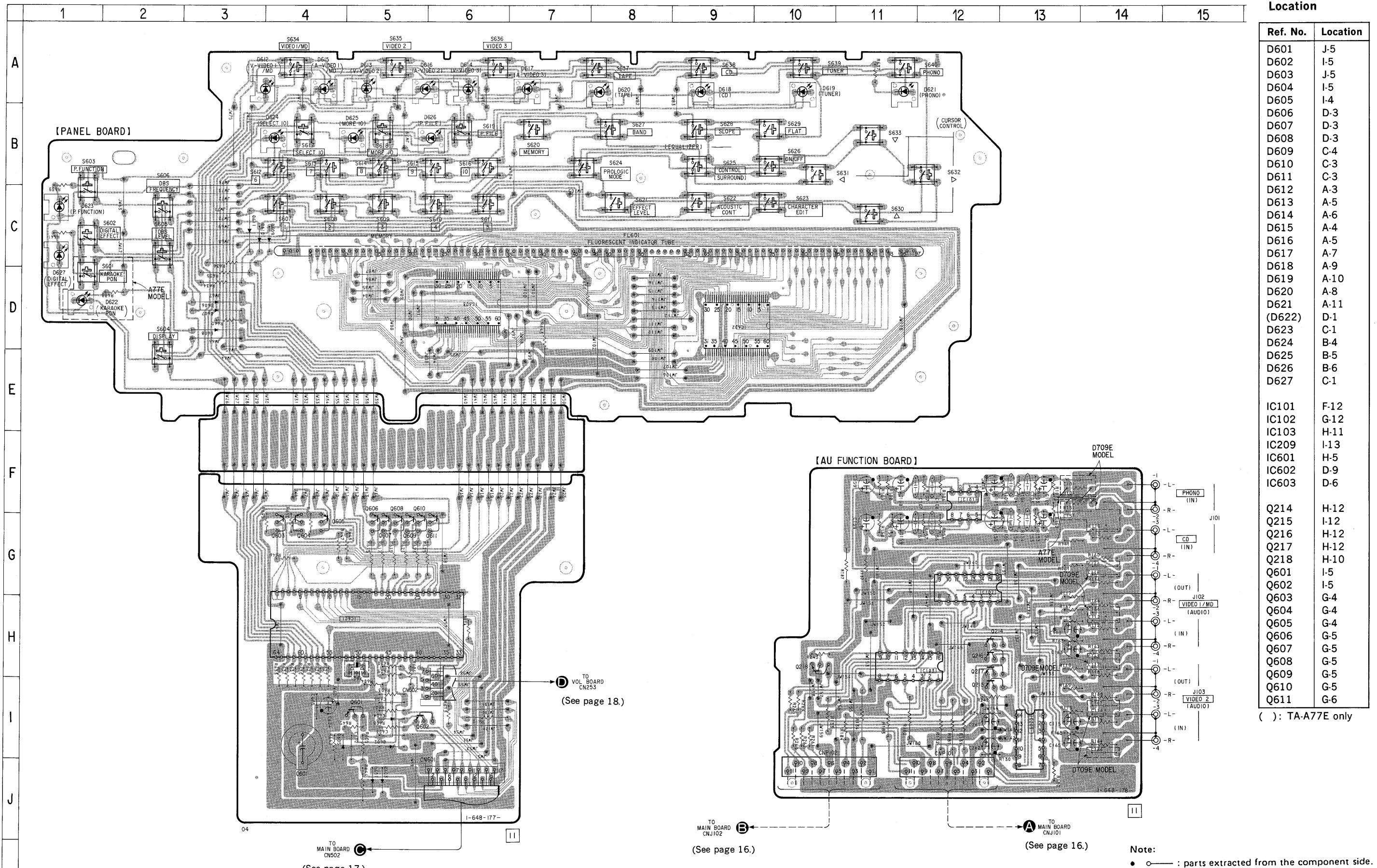
3-7. SCHEMATIC DIAGRAM—PANEL SECTION (TYPE 1)— • Refer to page 9 for IC Block Diagrams.



Notes:

- All capacitors are in μ F unless otherwise noted. pF: μ F 500V or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4$ W or less unless otherwise specified.
- \triangle : internal component.
- Voltage is dc with respect to ground under no-signal conditions. no mark: PHONO
- Voltages are taken with a VOM (Input Impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- \diamond : PHONO

3-8. PRINTED WIRING BOARDS—PANEL SECTION (TYPE I)— • Refer to page 8 for Semiconductor Lead Layouts.

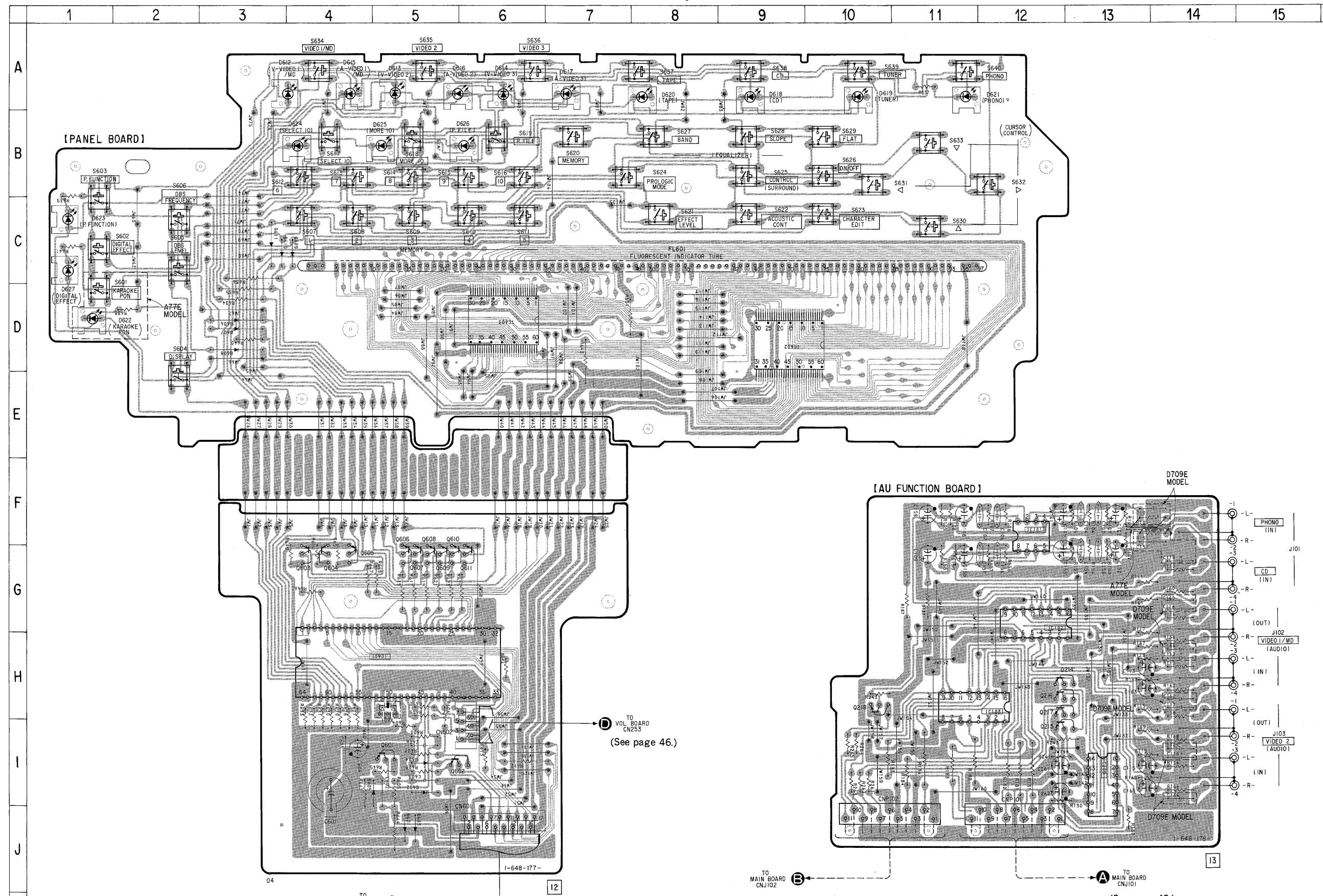


● Semiconductor
Location

Ref. No.	Location
D601	J-5
D602	I-5
D603	J-5
D604	I-5
D605	I-4
D606	D-3
D607	D-3
D608	D-3
D609	C-4
D610	C-3
D611	C-3
D612	A-3
D613	A-5
D614	A-6
D615	A-4
D616	A-5
D617	A-7
D618	A-9
D619	A-10
D620	A-8
D621	A-11
(D622)	D-1
D623	C-1
D624	B-4
D625	B-5
D626	B-6
D627	C-1
IC101	F-12
IC102	G-12
IC103	H-11
IC209	I-13
IC601	H-5
IC602	D-9
IC603	D-6
Q214	H-12
Q215	I-12
Q216	H-12
Q217	H-12
Q218	H-10
Q601	I-5
Q602	I-5
Q603	G-4
Q604	G-4
Q605	G-4
Q606	G-5
Q607	G-5
Q608	G-5
Q609	G-5
Q610	G-5
Q611	G-6

(): TA-A77E only

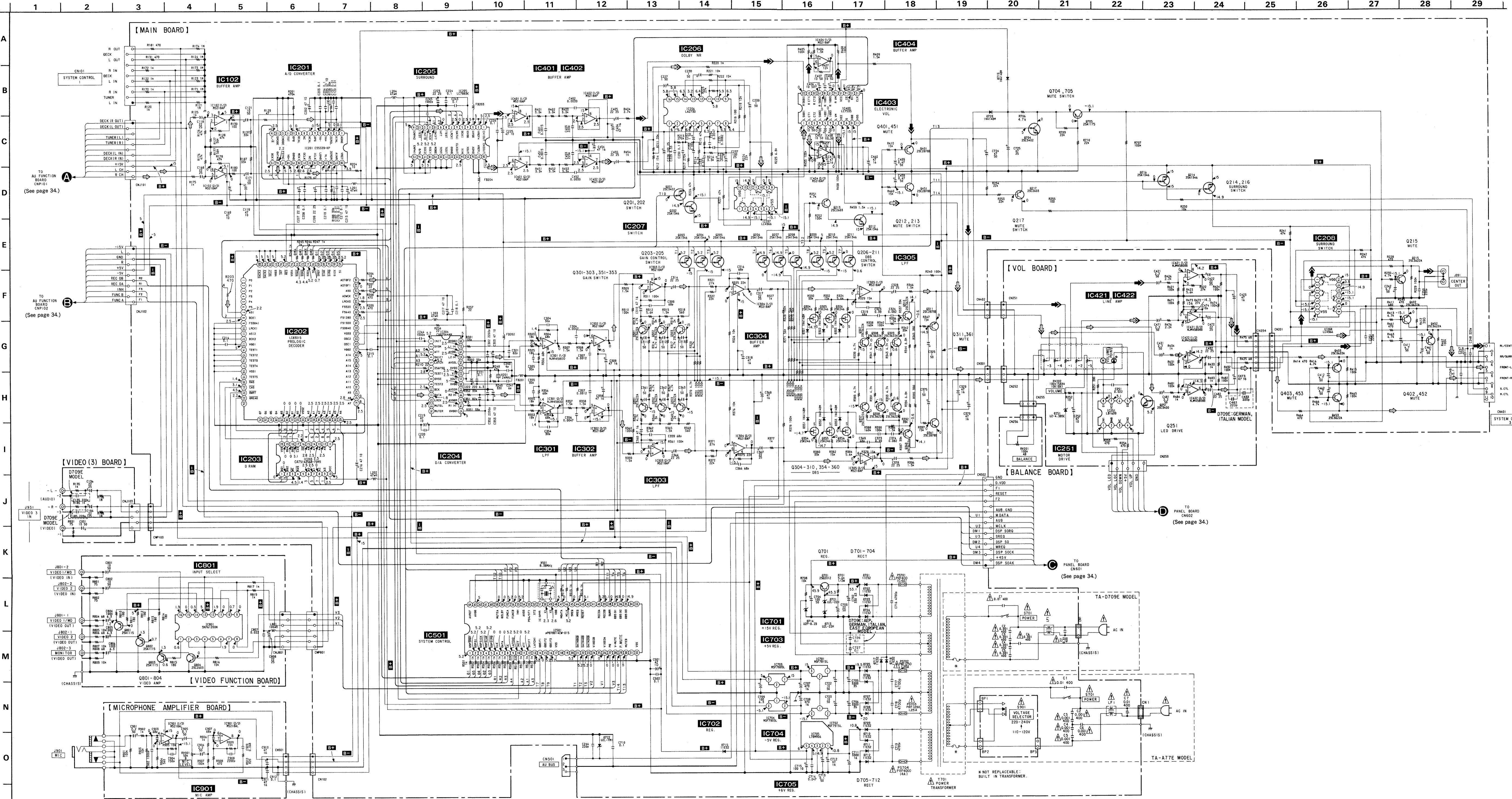
3-9. PRINTED WIRING BOARDS—PANEL SECTION (TYPE II)— • Refer to page 8 for Semiconductor Lead Layouts.



Note:

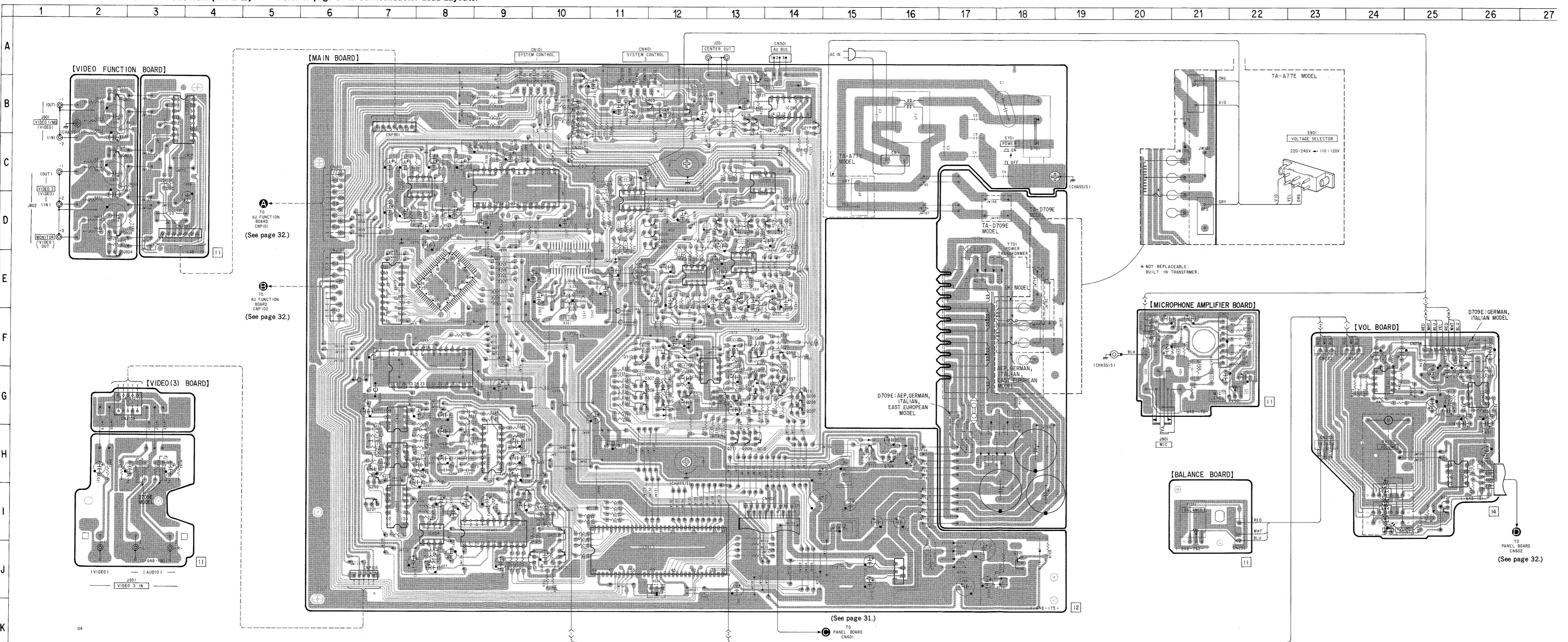
- : parts extracted from the component side.
- : Pattern on the side which is seen.

3-11. SCHEMATIC DIAGRAM—MAIN SECTION (TYPE II)— • Refer to page 9 for IC Block Diagrams.



- Refer to page 8 for Semiconductor Lead Layouts.

N (TYPE II)— • Refer to page 8



• Semiconductor Location		
Ref. No.	Location	Ref. No.
D251	I-25	IC801
D301	G-12	IC901
D302	F-12	
D303	G-12	Q201
D351	G-13	Q202
D352	F-13	Q203
D353	G-13	Q204
D701	J-17	Q205
D702	J-17	Q206
D703	J-17	Q207
D704	J-17	Q208
D705	H-17	Q209
D706	H-18	Q210
D707	G-17	Q211
D708	G-18	Q212
D709	E-17	Q213
D710	E-17	Q214
D711	E-17	Q215
D712	E-18	Q216
D713	J-18	Q217
D714	J-18	Q251
D715	J-14	Q301
D717	H-17	Q302
D718	H-17	Q303
D719	H-15	Q304
D720	H-16	Q305
D721	J-18	Q306
D722	B-14	Q307
		Q308
IC102	C-8	Q309
IC201	C-9	Q310
IC202	E-8	Q311
IC203	E-7	Q351
IC204	E-10	Q352
IC205	G-8	Q353
IC206	H-9	Q354
IC207	I-7	Q355
IC208	B-14	Q356
IC251	H-25	Q357
IC301	D-11	Q358
IC302	C-13	Q359
IC303	E-13	Q360
IC304	E-12	Q361
IC305	G-13	Q401
IC401	G-7	Q402
IC402	H-7	Q403
IC403	I-9	Q451
IC404	I-8	Q452
IC421	G-24	Q453
IC422	G-26	Q701
IC501	J-12	Q704
IC701	H-15	Q705
IC702	I-15	Q801
IC703	H-11	Q802
IC704	C-9	Q803
IC705	J-16	Q804

- : parts extracted from the component side
- : Pattern on the side which is seen.
- : Jumper wire connected to the ground on the component side.

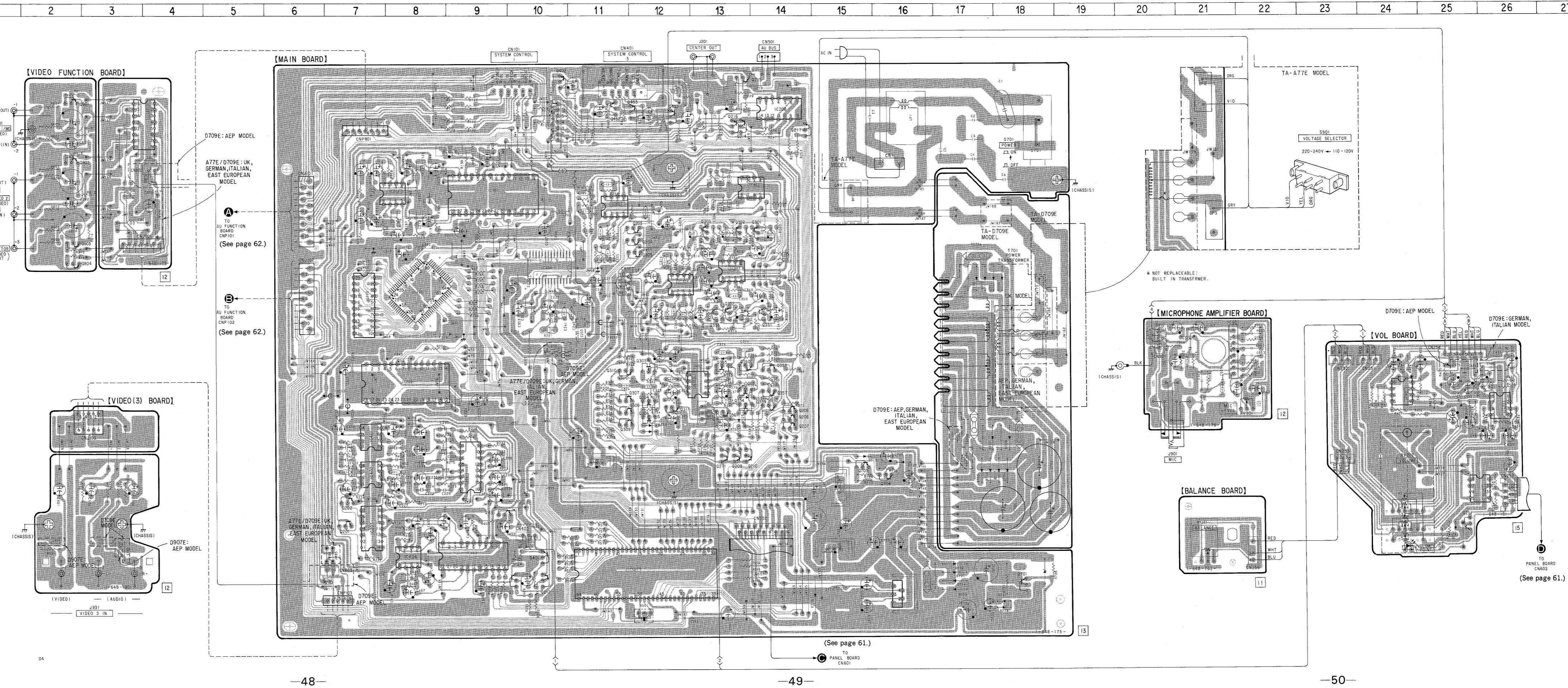
TED WIRING BOARDS—MAIN SECTION (TYPE III)— • Refer to page 8 for Semiconductor Lead Layouts.

semiconductor Location

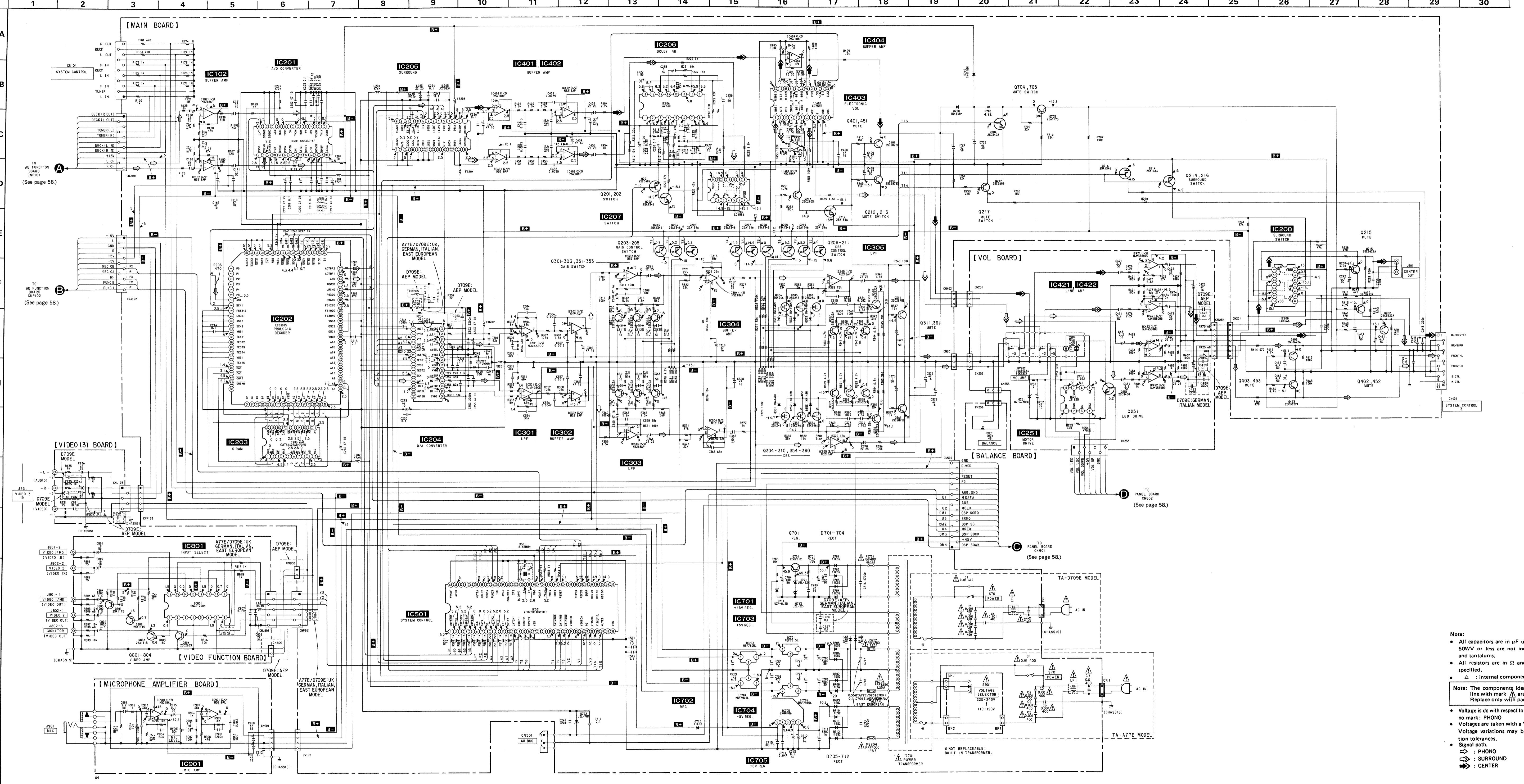
No.	Location	Ref. No.	Location
51	I-25	IC801	B-3
01	G-12	IC901	F-21
02	F-12		
03	G-12	Q201	I-7
51	G-13	Q202	H-7
52	F-13	Q203	D-12
53	G-13	Q204	D-12
01	J-17	Q205	D-12
02	J-17	Q206	G-14
03	J-17	Q207	G-14
04	J-17	Q208	G-14
05	H-17	Q209	H-13
06	H-18	Q210	H-13
07	G-17	Q211	H-13
08	G-18	Q212	J-10
09	E-17	Q213	J-10
00	E-17	Q214	B-13
11	E-17	Q215	B-13
12	E-18	Q216	B-13
13	J-18	Q217	B-14
14	J-18	Q251	I-25
15	J-14	Q301	D-14
17	H-17	Q302	D-13
18	H-17	Q303	D-13
19	H-15	Q304	G-12
20	H-16	Q305	F-12
21	J-18	Q306	G-12
22	B-14	Q307	G-11
		Q308	G-11
02	C-8	Q309	G-11
01	C-9	Q310	F-11
02	E-8	Q311	G-12
03	E-7	Q351	E-14
04	E-10	Q352	E-13
05	G-8	Q353	E-13
06	H-9	Q354	G-13
07	I-7	Q355	F-13
08	B-14	Q356	G-13
51	H-25	Q357	G-14
01	D-11	Q358	F-14
02	C-13	Q359	G-14
03	E-13	Q360	F-13
04	E-12	Q361	G-13
05	G-13	Q401	I-10
01	G-7	Q402	B-10
02	H-7	Q403	B-12
03	I-9	Q451	I-9
04	I-8	Q452	B-11
21	G-24	Q453	B-12
22	G-26	Q701	J-18
01	J-12	Q704	H-16
01	H-15	Q705	H-15
02	I-15	Q801	B-2
03	H-11	Q802	C-2
04	C-9	Q803	D-2
05	J-16	Q804	E-2

1

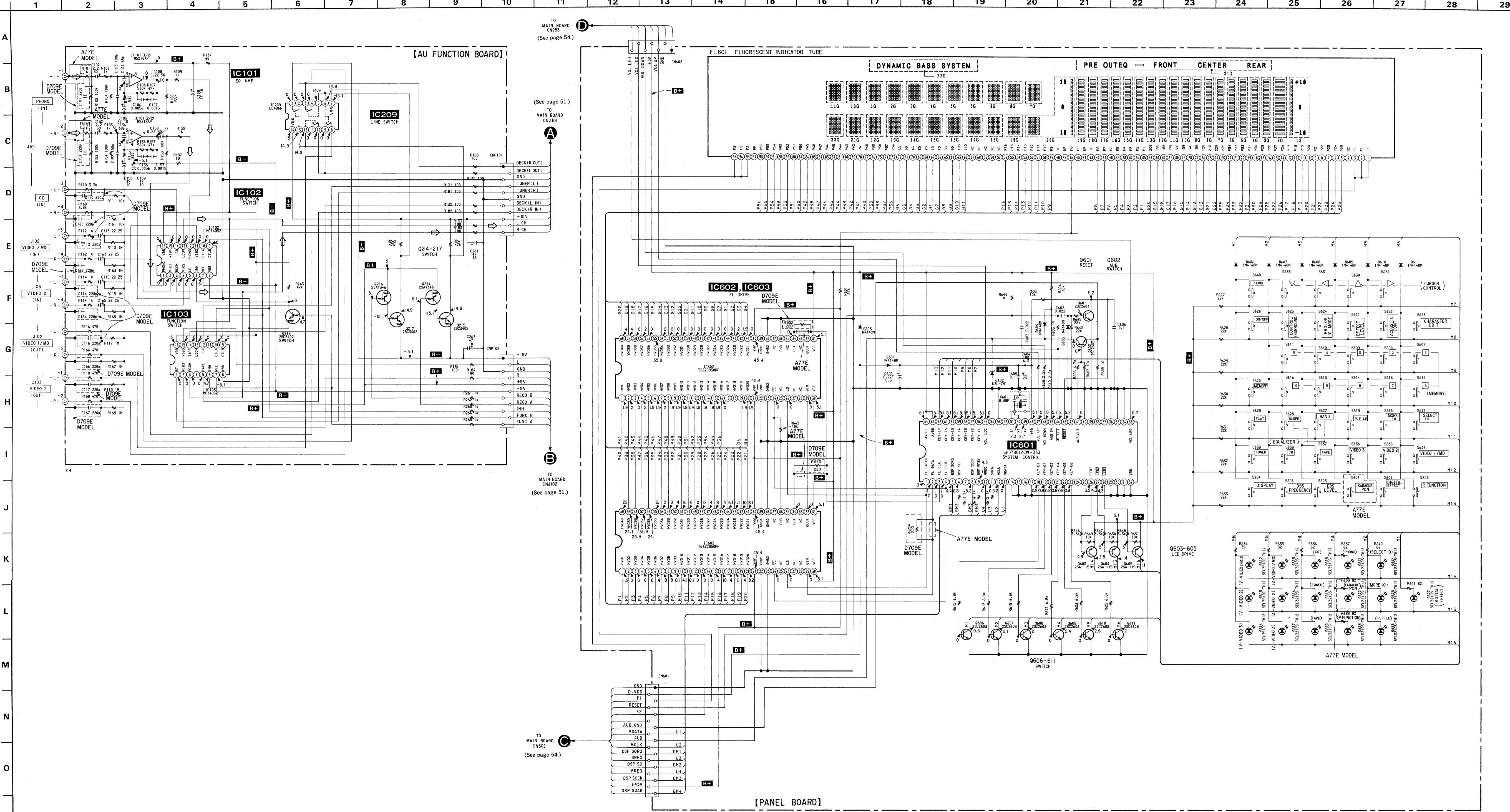
- : parts extracted from the component side.
- : Pattern on the side which is seen.
- : Jumper wire connected to the ground pattern on the component side.



3-14. SCHEMATIC DIAGRAM—MAIN SECTION (TYPE III)— Refer to page 9 for IC Block Diagrams.

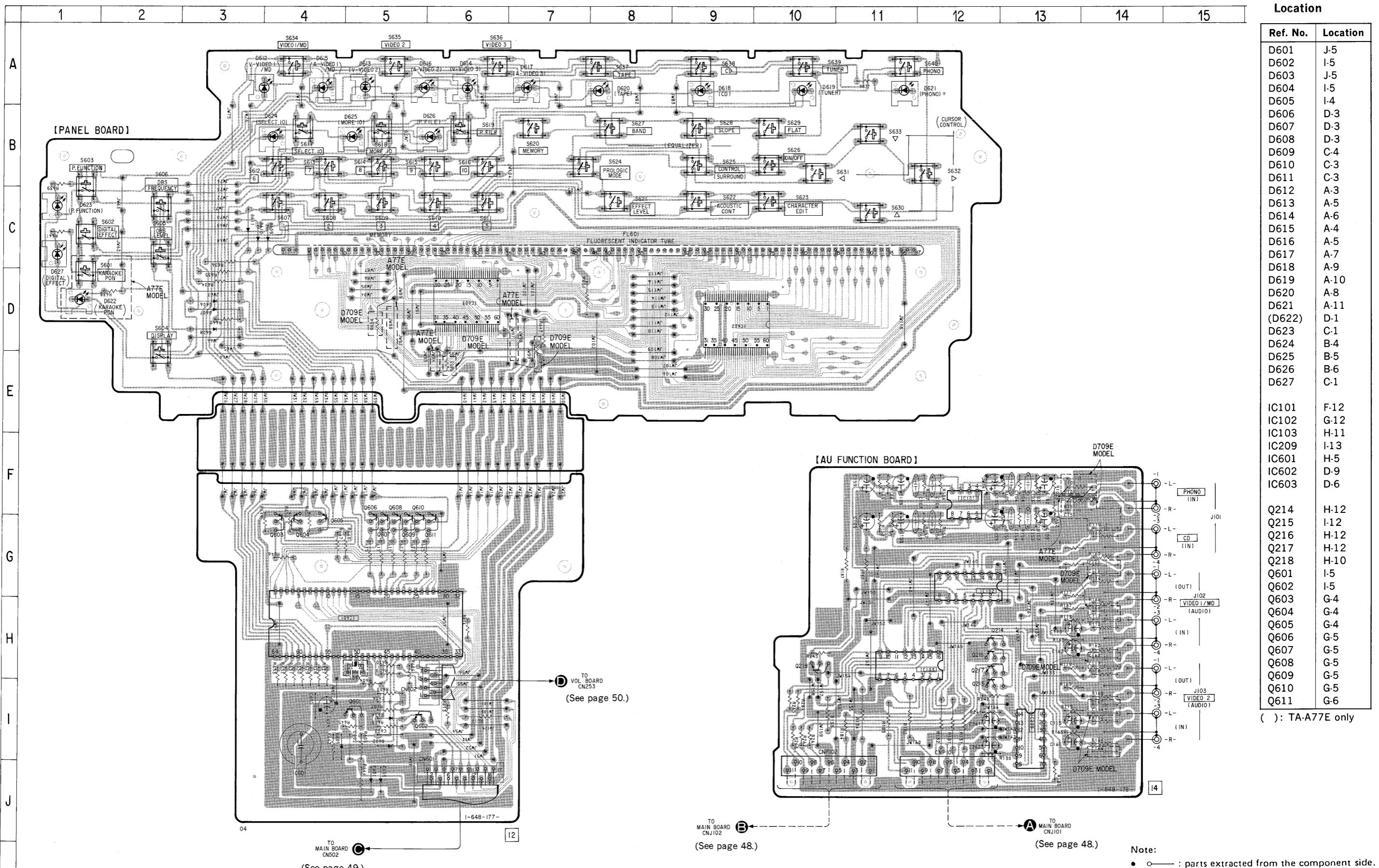


3-15. SCHEMATIC DIAGRAM—PANEL SECTION (TYPE III)— • Refer to page 9 for IC Block Diagrams.



• Refer to page 8 for Semiconductor Lead Layouts.

- Refer to page 8 for Semiconductor Lead Layouts



Note:

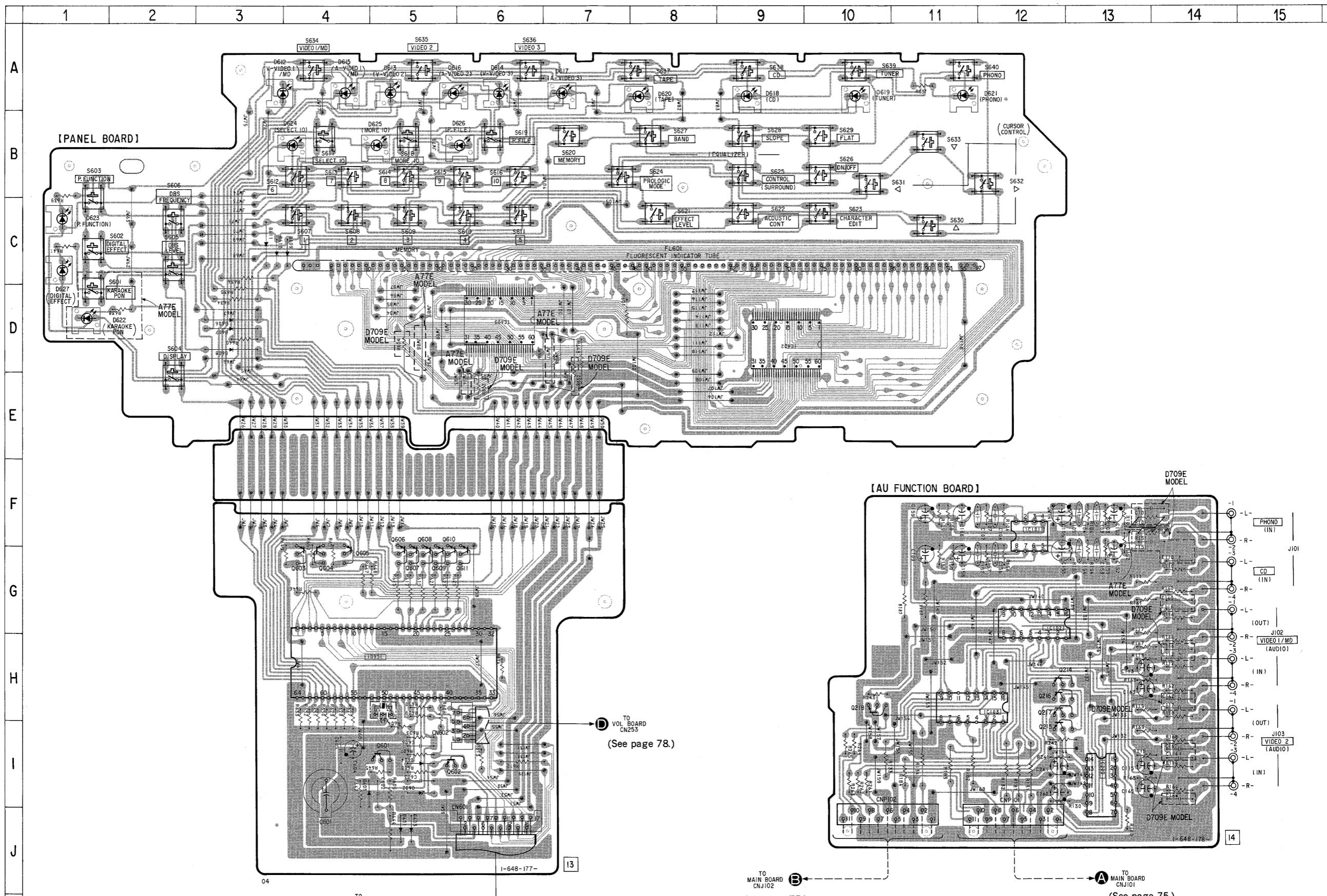
-  : parts extracted from the component side.
- : Pattern on the side which is seen.

3-17. PRINTED WIRING BOARDS—PANEL SECTION (TYPE IV)— • Refer to page 8 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location
D601	J-5
D602	I-5
D603	J-5
D604	I-5
D605	I-4
D606	D-3
D607	D-3
D608	D-3
D609	C-4
D610	C-3
D611	C-3
D612	A-3
D613	A-5
D614	A-6
D615	A-4
D616	A-5
D617	A-7
D618	A-9
D619	A-10
D620	A-8
D621	A-11
(D622)	D-1
D623	C-1
D624	B-4
D625	B-5
D626	B-6
D627	C-1
IC101	F-12
IC102	G-12
IC103	H-11
IC209	I-13
IC601	H-5
IC602	D-9
IC603	D-6
Q214	H-12
Q215	I-12
Q216	H-12
Q217	H-12
Q218	H-10
Q601	I-5
Q602	I-5
Q603	G-4
Q604	G-4
Q605	G-4
Q606	G-5
Q607	G-5
Q608	G-5
Q609	G-5
Q610	G-5
Q611	G-6

(): TA-A77E only

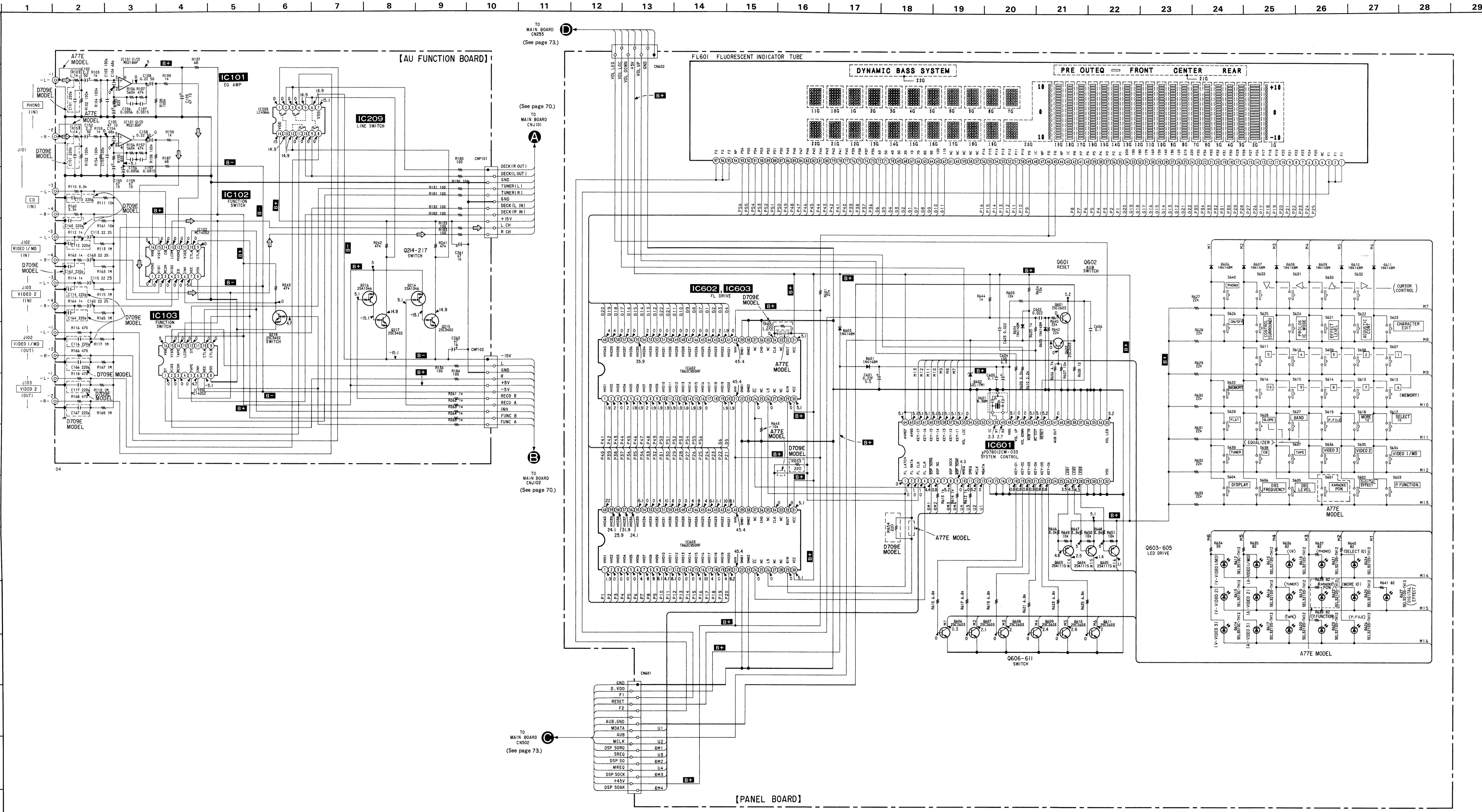


Note:

- : parts extracted from the component side.
- : Pattern on the side which is seen.

3-18. SCHEMATIC DIAGRAM—PANEL SECTION (TYPE IV)— • Refer to page 9 for IC Block D

Diagram



Capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$
/ or less are not indicated except for electrolytics
antalamus.

Resistors are in Ω and $1/4\text{W}$ or less unless otherwise
fied.

: internal component.

ge is dc with respect to ground under no-signal conditions.

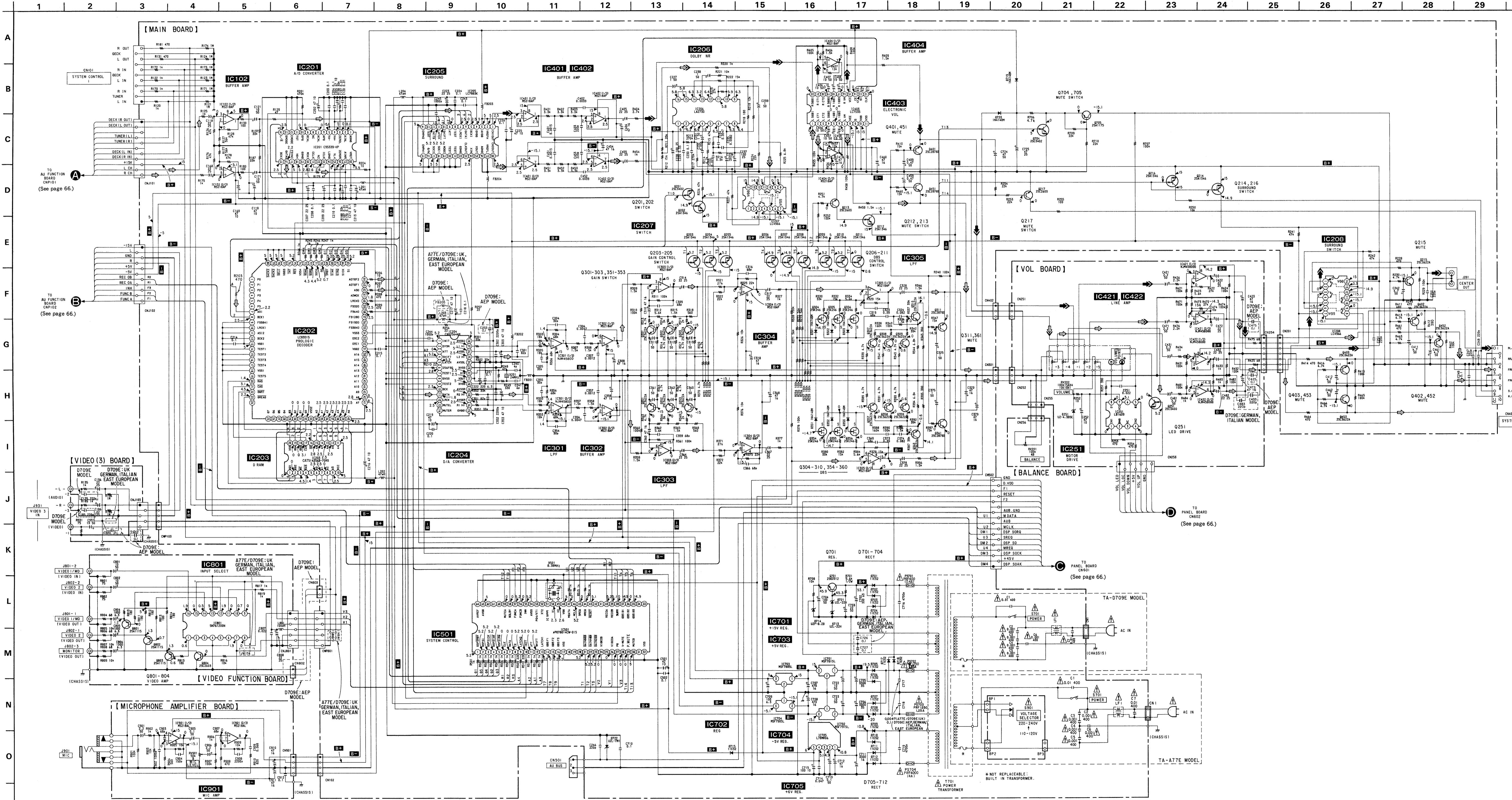
ark: PHONO

ges are taken with a VOM (Input Impedance $10\text{M}\Omega$).
ge variations may be noted due to normal produc-
lerances.

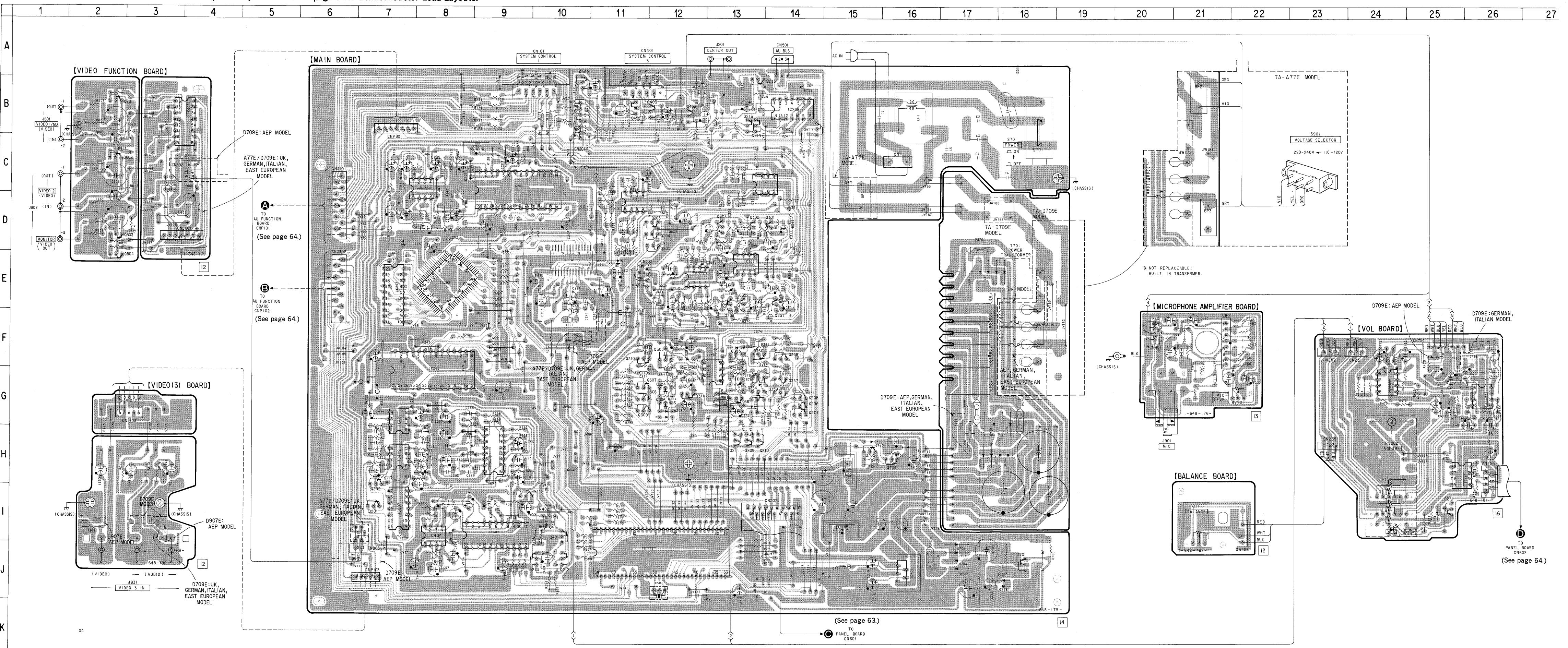
I path.

PHONO

3-19. SCHEMATIC DIAGRAM—MAIN SECTION (TYPE IV)— • Refer to page 9 for IC Block Diagrams.



3-20. PRINTED WIRING BOARDS—MAIN SECTION (TYPE IV)— • Refer to page 8 for Semiconductor Lead Layouts.



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D251	I-25	IC801	B-3
D301	G-12	IC901	F-21
D302	F-12		
D303	G-12	Q201	I-7
D351	G-13	Q202	H-7
D352	F-13	Q203	D-12
D353	G-13	Q204	D-12
D701	J-17	Q205	D-12
D702	J-17	Q206	G-14
D703	J-17	Q207	G-14
D704	J-17	Q208	G-14
D705	H-17	Q209	H-13
D706	H-18	Q210	H-13
D707	G-17	Q211	H-13
D708	G-18	Q212	J-10
D709	E-17	Q213	J-10
D710	E-17	Q214	B-13
D711	E-17	Q215	B-13
D712	E-18	Q216	B-13
D713	J-18	Q217	B-14
D714	J-18	Q251	I-25
D715	J-14	Q301	D-14
D717	H-17	Q302	D-13
D718	H-17	Q303	D-13
D719	H-15	Q304	G-12
D720	H-16	Q305	F-12
D721	J-18	Q306	G-12
D722	B-14	Q307	G-11
IC102	C-8	Q308	G-11
IC201	C-9	Q309	G-11
IC202	E-8	Q310	G-12
IC203	E-7	Q311	E-14
IC204	E-10	Q351	E-13
IC205	G-8	Q352	E-13
IC206	H-9	Q353	G-13
IC207	I-7	Q354	F-13
IC208	B-14	Q355	G-13
IC251	H-25	Q356	G-13
IC301	D-11	Q357	G-14
IC302	C-13	Q358	F-14
IC303	E-13	Q359	G-14
IC304	E-12	Q360	F-13
IC305	G-13	Q361	G-13
IC401	G-7	Q402	B-10
IC402	H-7	Q403	B-12
IC403	I-9	Q451	I-9
IC404	I-8	Q452	B-11
IC421	G-24	Q453	B-12
IC422	G-26	Q701	J-18
IC501	J-12	Q704	H-16
IC701	H-15	Q705	H-15
IC702	I-15	Q801	B-2
IC703	H-11	Q802	C-2
IC704	C-9	Q803	D-2
IC705	J-16	Q804	E-2

Note:

- : parts extracted from the component side.
- : Pattern on the side which is seen.
- : Jumper wire connected to the ground pattern on the component side.

SECTION 4 EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts
Example :

KNOB, BALANCE (WHITE)... (RED)
↑ ↑
Parts Color Cabinet's Color

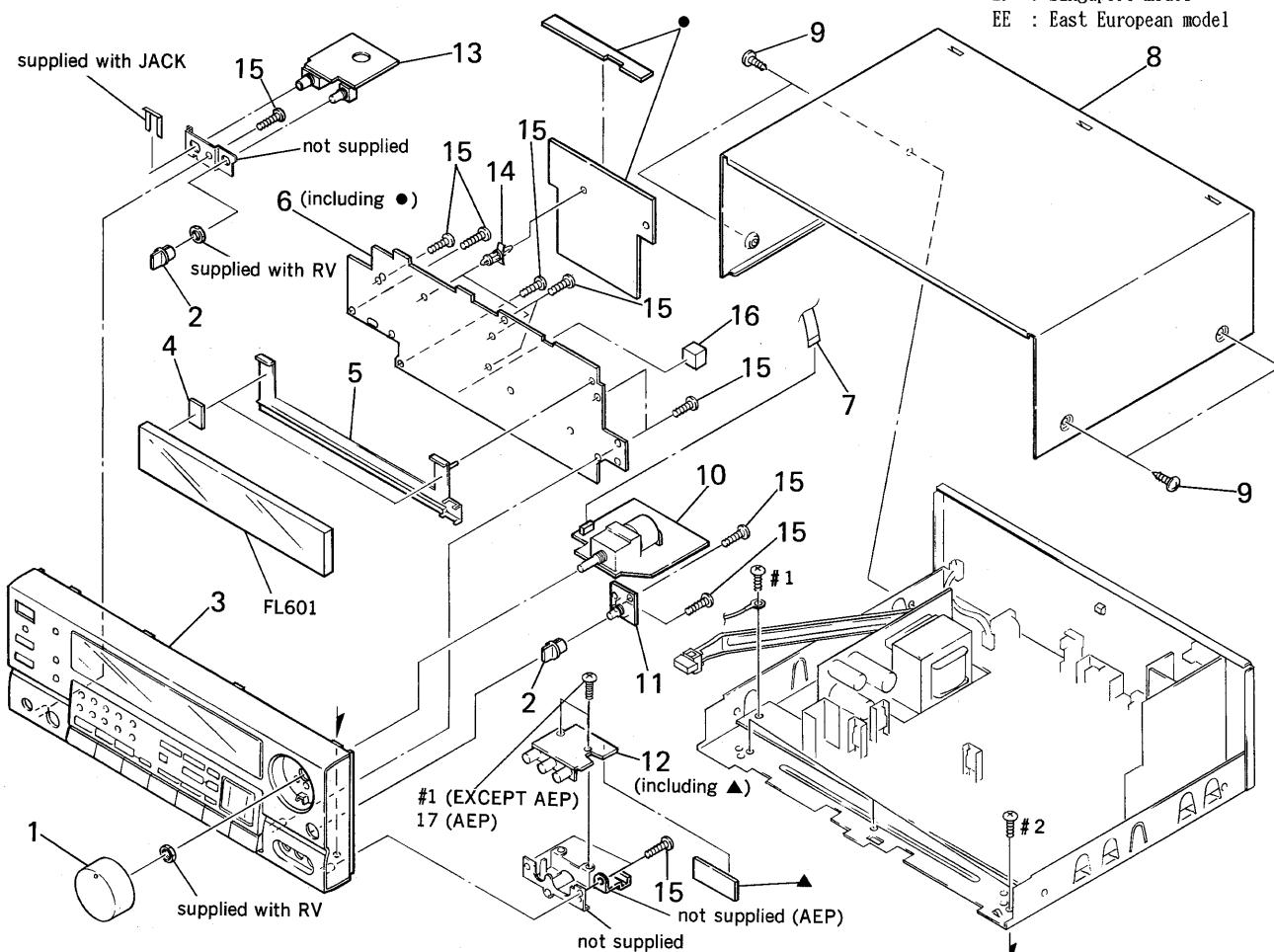
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Abbreviations

G : German model
IT : Italian model
AUS : Australian model
JE : Tourist model
EA : Saudi Arabia model
MY : Malaysia model
SP : Singapore model
EE : East European model

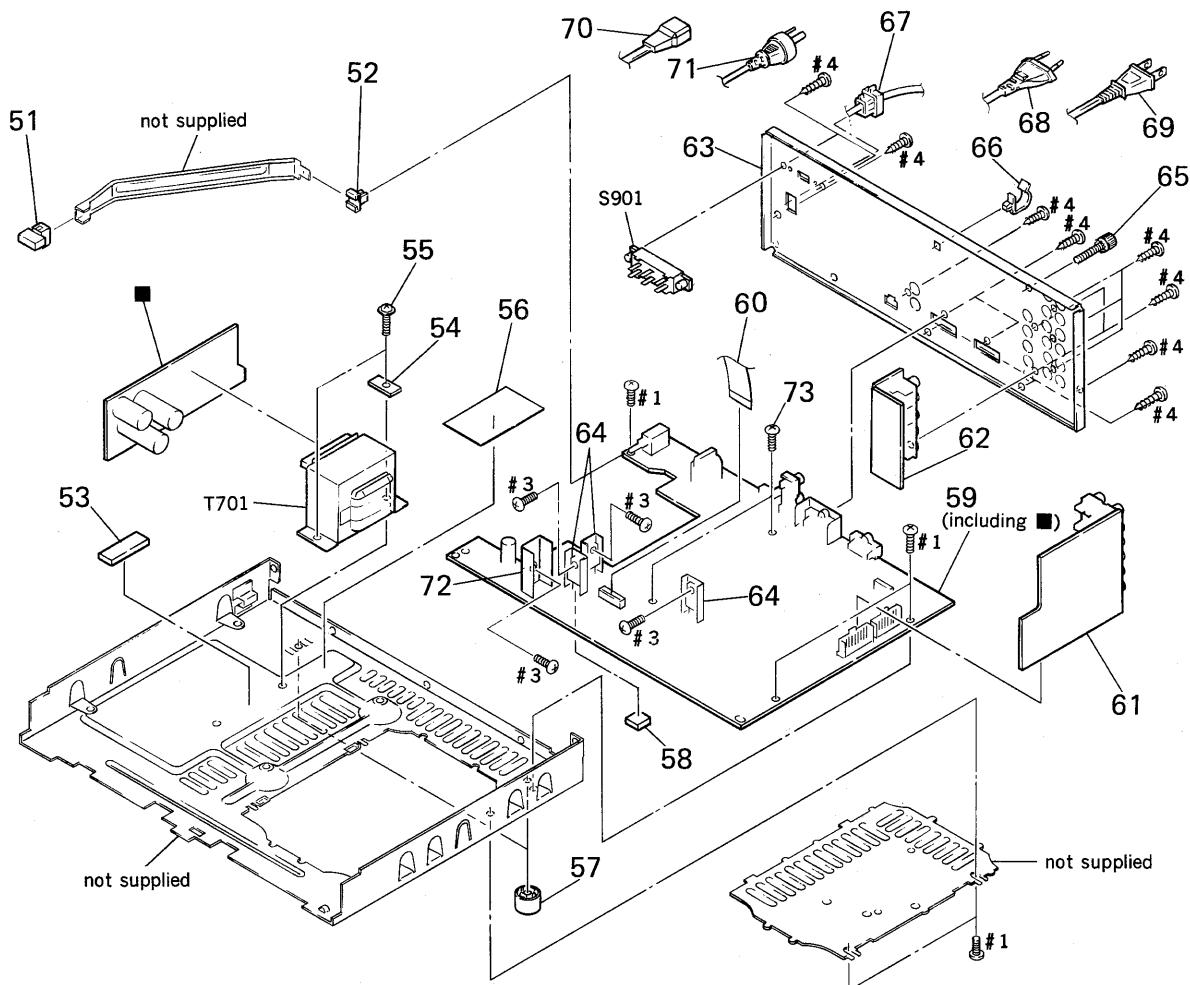
4-1. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4943-445-1	KNOB (VOL) ASSY		* 10	A-4360-773-A	VOL BOARD, COMPLETE (TA-A77E/TA-D709E:UK, EE)	
2	4-950-652-11	KNOB (DIA. 12), ROUND		* 10	A-4365-532-A	VOL BOARD, COMPLETE (TA-D709E:AEP)	
3	X-4943-564-1	PANEL ASSY, FRONT (TA-D709E)		* 10	A-4365-533-A	VOL BOARD, COMPLETE (TA-D709E:G, IT)	
3	X-4943-565-1	PANEL ASSY, FRONT (TA-A77E)		* 11	1-648-762-11	BALANCE BOARD	
* 4	4-934-853-01	CUSHION		* 12	1-648-180-11	VIDEO (3) BOARD	
* 5	4-957-917-01	HOLDER, FL TUBE		* 13	1-648-176-11	MICROPHONE AMPLIFIER BOARD	
* 6	A-4360-769-A	PANEL BOARD, COMPLETE (TA-D709E)		14	4-924-098-91	HOLDER, PC BOARD	
* 6	A-4360-952-A	PANEL BOARD, COMPLETE (TA-A77E)		15	4-951-620-01	SCREW (2.6X8), +BVT	
7	1-690-420-11	WIRE, FLAT TYPE (7 CORE) (TA-D709E:EE)		16	4-608-466-01	SPACER	
7	1-690-635-11	WIRE, FLAT TYPE (7 CORE) (TA-A77E/TA-D709E:AEP, UK, G, IT)		17	4-886-821-11	SCREW, S TIGHT, +PTTWH 3X6 (TA-D709E:AEP)	
* 8	4-939-803-31	CASE		FL601	1-517-167-11	INDICATOR TUBE, FLUORESCENT	
9	3-363-099-01	SCREW (CASE 3 TP2)					

4-2. CHASSIS SECTION

The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-942-061-11	BUTTON (P)		* 63	4-957-918-01	PANEL (B3120), BACK (TA-D709E:AEP, IT, EE)	
52	4-866-342-00	JOINT (B), KNOB		* 63	4-957-918-11	PANEL (B3120), BACK (TA-D709E:AEP)	
* 53	4-931-174-01	SPACER		* 63	4-957-918-21	PANEL (B3120), BACK (TA-D709E:UK)	
54	4-946-540-01	WASHER (SQUARE)		* 63	4-957-918-31	PANEL (B3120), BACK (TA-D709E:G)	
55	4-946-541-01	SCREW (4X8), +PWHTT		* 63	4-957-918-41	PANEL (B3120), BACK (TA-A77E:E, AUS, JE)	
* 56	4-945-761-11	SHEET (INSULATING)		* 63	4-957-918-51	PANEL (B3120), BACK (TA-A77E:EA, MY, SP)	
57	4-931-169-01	FOOT		* 64	3-309-144-21	HEAT SINK	
58	9-911-841-XX	CUSHION		65	4-947-010-01	SCREW, FEEDER FIXED	
* 59	A-4360-765-A	MAIN BOARD, COMPLETE (TA-D709E:G, IT, EE)		* 66	4-949-235-01	HOOK	
* 59	A-4360-766-A	MAIN BOARD, COMPLETE (TA-A77E)		* 67	3-703-244-00	BUSHING (2104), CORD (TA-A77E:EA, AUS, MY, SP/TA-D709E)	
* 59	A-4360-768-A	MAIN BOARD, COMPLETE (TA-D709E:UK)		* 67	3-703-571-11	BUSHING (S) (4516), CORD (TA-A77E:E, JE)	
* 59	A-4365-527-A	MAIN BOARD, COMPLETE (TA-D709E:AEP)		△68	1-575-654-11	CORD, POWER (TA-A77E:EA, MY, SP/TA-D709E:AEP, G, IT, EE)	
60	1-751-486-11	WIRE (FLAT TYPE) (17 CORE)		△69	1-575-656-11	CORD, POWER (TA-A77E:E, JE)	
* 61	A-4360-770-A	AU FUNCTION BOARD, COMPLETE (TA-A77E)		△70	1-575-669-21	CORD, POWER (TA-D709E:UK)	
* 61	A-4360-774-A	AU FUNCTION BOARD, COMPLETE (TA-D709E:UK, G, IT, EE)		△71	1-751-355-11	CORD, POWER (TA-A77E:AUS)	
* 61	A-4365-529-A	AU FUNCTION BOARD, COMPLETE (TA-D709E:AEP)		* 72	4-880-403-11	HEAT SINK	
* 62	A-4360-771-A	VIDEO FUNCTION BOARD, COMPLETE (TA-A77E/TA-D709E:UK, G, IT, EE)		73	3-704-515-21	SCREW (BV/RING)	
* 62	A-4365-530-A	VIDEO FUNCTION BOARD, COMPLETE (TA-D709E:AEP)		△S901	1-570-046-21	SWITCH, VOLTAGE CHANGE (VOLTAGE SELECTOR) (TA-A77E)	
				△T701	1-423-671-11	TRANSFORMER, POWER (TA-D709E)	
				△T701	1-423-672-11	TRANSFORMER, POWER (TA-A77E)	

SECTION 5 ELECTRICAL PARTS LIST

AU FUNCTION

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- **RESISTORS**
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

● **SEMICONDUCTORS**

In each case, $u:\mu$, for example:
 $uA:\mu A$. $uPA:\mu PA$.
 $uPB:\mu PB$. $uPC:\mu PC$. $uPD:\mu PD$.

● **CAPACITORS**

$uF:\mu F$ When indicating parts by reference number, please include the board.
 $uH:\mu H$

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

● **Abbreviations**

G	: German model
IT	: Italian model
AUS	: Australian model
JE	: Tourist model
EA	: Saudi Arabia model
MY	: Malaysia model
SP	: Singapore model
EE	: East European model

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
*	A-4360-770-A	AU FUNCTION BOARD, COMPLETE (TA-A77E)				C162	1-162-286-31	CERAMIC (TA-D709E)	220PF	10%	50V
*	A-4360-774-A	AU FUNCTION BOARD, COMPLETE (TA-D709E:UK, G, IT, EE)				C163	1-126-049-11	ELECT	22uF	20%	25V
*	A-4365-529-A	AU FUNCTION BOARD, COMPLETE (TA-D709E:AEP)	*****			C164	1-162-286-31	CERAMIC (TA-D709E)	220PF	10%	50V
		< CAPACITOR >				C165	1-126-049-11	ELECT	22uF	20%	25V
C101	1-162-286-31	CERAMIC (TA-D709E)	220PF	10%	50V	C166	1-162-286-31	CERAMIC (TA-D709E)	220PF	10%	50V
C102	1-126-161-11	ELECT	2.2uF	20%	50V	C167	1-162-286-31	CERAMIC (TA-D709E)	220PF	10%	50V
C103	1-164-070-11	CERAMIC	100PF	5%	50V	C261	1-126-022-11	ELECT	47uF	20%	16V
C104	1-164-066-11	CERAMIC	68PF	5%	50V	C262	1-126-022-11	ELECT	47uF	20%	16V
C105	1-126-022-11	ELECT	47uF	20%	10V			< CONNECTOR >			
C106	1-130-480-00	MYLAR	0.0056uF	5%	50V			* CNP101 1-573-979-11 CONNECTOR, BOARD TO BOARD 11P			
C107	1-130-473-00	MYLAR	0.0015uF	5%	50V			* CNP102 1-573-979-11 CONNECTOR, BOARD TO BOARD 11P			
C108	1-124-464-11	ELECT	0.22uF	20%	50V			< IC >			
C109	1-126-022-11	ELECT	47uF	20%	10V						
C110	1-162-286-31	CERAMIC (TA-D709E)	220PF	10%	50V	IC101	8-759-636-74	IC	M5218AP-22		
C112	1-162-286-31	CERAMIC (TA-D709E)	220PF	10%	50V	IC102	8-759-000-48	IC	MC14052BCP		
C113	1-126-049-11	ELECT	22uF	20%	25V	IC103	8-759-000-48	IC	MC14052BCP		
C114	1-162-286-31	CERAMIC (TA-D709E)	220PF	10%	50V	IC209	8-759-801-01	IC	LC4966		
C115	1-126-049-11	ELECT	22uF	20%	25V			< JACK >			
C116	1-162-286-31	CERAMIC (TA-D709E)	220PF	10%	50V	J101	1-573-520-11	JACK, PIN 4P	(PHONO/CD)		
C117	1-162-286-31	CERAMIC (TA-D709E)	220PF	10%	50V	J102	1-573-520-11	JACK, PIN 4P	(VIDEO 1/MD)		
C151	1-162-286-31	CERAMIC (TA-D709E)	220PF	10%	50V	J103	1-573-520-11	JACK, PIN 4P	(VIDEO 2)		
C152	1-126-161-11	ELECT	2.2uF	20%	50V			< TRANSISTOR >			
C153	1-164-070-11	CERAMIC	100PF	5%	50V	Q214	8-729-900-63	TRANSISTOR	DTA124ES		
C154	1-164-066-11	CERAMIC	68PF	5%	50V	Q215	8-729-900-80	TRANSISTOR	DTC114ES		
C155	1-126-022-11	ELECT	47uF	20%	10V	Q216	8-729-900-63	TRANSISTOR	DTA124ES		
C156	1-130-480-00	MYLAR	0.0056uF	5%	50V	Q217	8-729-900-80	TRANSISTOR	DTC114ES		
C157	1-130-473-00	MYLAR	0.0015uF	5%	50V	Q218	8-729-900-80	TRANSISTOR	DTC114ES		
C158	1-124-464-11	ELECT	0.22uF	20%	50V			< RESISTOR >			
C159	1-126-022-11	ELECT	47uF	20%	10V	R101	1-249-417-11	CARBON (TA-D709E)	1K	5%	1/4W
C160	1-162-286-31	CERAMIC (TA-D709E)	220PF	10%	50V	R102	1-249-441-11	CARBON	100K	5%	1/4W
						R103	1-249-417-11	CARBON	1K	5%	1/4W
						R104	1-249-441-11	CARBON	100K	5%	1/4W
						R105	1-249-416-11	CARBON	820	5%	1/4W

AU FUNCTION

BALANCE

MAIN

Ref. No.	Part No.	Description	Remark
R106	1-247-897-11	CARBON	560K 5% 1/4W
R107	1-249-437-11	CARBON	47K 5% 1/4W
R108	1-249-441-11	CARBON	100K 5% 1/4W
R109	1-249-417-11	CARBON	1K 5% 1/4W
R110	1-249-423-11	CARBON	3.3K 5% 1/4W
R111	1-249-429-11	CARBON	10K 5% 1/4W
R112	1-249-417-11	CARBON	1K 5% 1/4W
R113	1-247-903-00	CARBON	1M 5% 1/4W
R114	1-249-417-11	CARBON	1K 5% 1/4W
R115	1-247-903-00	CARBON	1M 5% 1/4W
R116	1-249-413-11	CARBON	470 5% 1/4W
R117	1-247-903-00	CARBON	1M 5% 1/4W
R118	1-249-413-11	CARBON	470 5% 1/4W
R119	1-247-903-00	CARBON	1M 5% 1/4W
R130-134	1-247-807-31	CARBON	100 5% 1/4W
R137	1-249-403-11	CARBON	68 5% 1/4W
R151	1-249-417-11	CARBON	1K 5% 1/4W
	(TA-D709E)		
R152	1-249-441-11	CARBON	100K 5% 1/4W
R153	1-249-417-11	CARBON	1K 5% 1/4W
R154	1-249-441-11	CARBON	100K 5% 1/4W
R155	1-249-416-11	CARBON	820 5% 1/4W
R156	1-247-897-11	CARBON	560K 5% 1/4W
R157	1-249-437-11	CARBON	47K 5% 1/4W
R158	1-249-441-11	CARBON	100K 5% 1/4W
R159	1-249-417-11	CARBON	1K 5% 1/4W
R160	1-249-423-11	CARBON	3.3K 5% 1/4W
R161	1-249-429-11	CARBON	10K 5% 1/4W
R162	1-249-417-11	CARBON	1K 5% 1/4W
R163	1-247-903-00	CARBON	1M 5% 1/4W
R164	1-249-417-11	CARBON	1K 5% 1/4W
R165	1-247-903-00	CARBON	1M 5% 1/4W
R166	1-249-413-11	CARBON	470 5% 1/4W
R167	1-247-903-00	CARBON	1M 5% 1/4W
R168	1-249-413-11	CARBON	470 5% 1/4W
R169	1-247-903-00	CARBON	1M 5% 1/4W
R180-184	1-247-807-31	CARBON	100 5% 1/4W
R187	1-249-403-11	CARBON	68 5% 1/4W
R241-243	1-249-437-11	CARBON	47K 5% 1/4W
R261-265	1-249-417-11	CARBON	1K 5% 1/4W

Ref. No.	Part No.	Description	Remark
*	1-648-762-11	BALANCE BOARD	***** < VARIABLE RESISTOR >
RV201 1-241-385-11 RES, VAR, CARBON 100K (BALANCE)			
*	A-4360-765-A	MAIN BOARD, COMPLETE (TA-D709E:G, IT, EE)	*****
*	A-4360-766-A	MAIN BOARD, COMPLETE (TA-A77E)	
*	A-4360-768-A	MAIN BOARD, COMPLETE (TA-D709E:UK)	
*	A-4365-527-A	MAIN BOARD, COMPLETE (TA-D709E:AEP)	*****
< BASE POST >			
BP1	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P (TA-A77E)	
* BP2	1-560-595-00	TERMINAL (WITH BASE) (TA-A77E)	
* BP3	1-560-595-00	TERMINAL (WITH BASE) (TA-A77E)	
< CAPACITOR >			
▲C1	1-161-744-51	CERAMIC	0.01uF 10% 400V
▲C2	1-161-741-00	CERAMIC	0.001uF 10% 400V
▲C3	1-161-741-00	CERAMIC	0.001uF 10% 400V
▲C4	1-161-741-00	CERAMIC	0.001uF 10% 400V
▲C5	1-161-741-00	CERAMIC	0.001uF 10% 400V
▲C6	1-161-741-00	CERAMIC	0.001uF 10% 400V
▲C7	1-161-744-51	CERAMIC	0.01uF 10% 400V
C118	1-126-049-11	ELECT	22uF 20% 25V
C119	1-126-022-11	ELECT	47uF 20% 10V
C120	1-136-153-00	FILM	0.01uF 5% 50V
C121	1-126-059-11	ELECT	10uF 20% 50V
C137	1-136-153-00	FILM	0.01uF 5% 50V
C168	1-126-049-11	ELECT	22uF 20% 25V
C169	1-126-022-11	ELECT	47uF 20% 10V
C170	1-136-153-00	FILM	0.01uF 5% 50V
C171	1-126-059-11	ELECT	10uF 20% 50V
C187	1-136-153-00	FILM	0.01uF 5% 50V
C202	1-126-022-11	ELECT	47uF 20% 10V
C203	1-164-159-11	CERAMIC	0.1uF 50V
C204	1-164-159-11	CERAMIC	0.1uF 50V
C205	1-126-022-11	ELECT	47uF 20% 10V
C207	1-126-049-11	ELECT	22uF 20% 25V
C208	1-164-159-11	CERAMIC	0.1uF 50V
C209	1-126-049-11	ELECT	22uF 20% 25V
C210	1-164-159-11	CERAMIC	0.1uF 50V
C212	1-164-159-11	CERAMIC	0.1uF 50V

The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark		Ref. No.	Part No.	Description	Remark			
C213	1-126-022-11	ELECT	47uF	20%	10V	C309	1-164-066-11	CERAMIC	68PF	5%	50V
C214	1-164-159-11	CERAMIC	0.1uF		50V	C310	1-126-022-11	ELECT	47uF	20%	16V
C215	1-164-159-11	CERAMIC	0.1uF		50V	C311-313					
C216	1-126-022-11	ELECT	47uF	20%	10V		1-126-301-11	ELECT	1uF	20%	50V
C217	1-126-022-11	ELECT	47uF	20%	10V	C314	1-126-049-11	ELECT	22uF	20%	25V
						C316	1-164-066-11	CERAMIC	68PF	5%	50V
C218	1-164-159-11	CERAMIC	0.1uF		50V	C317	1-126-049-11	ELECT	22uF	20%	25V
C219	1-126-022-11	ELECT	47uF	20%	10V	C318	1-126-022-11	ELECT	47uF	20%	16V
C220	1-164-159-11	CERAMIC	0.1uF		50V	C319	1-164-066-11	CERAMIC	68PF	5%	50V
C221	1-164-159-11	CERAMIC	0.1uF		50V	C323	1-136-841-81	FILM	0.39uF	5%	50V
C222	1-124-587-11	ELECT	220uF	20%	6.3V	C324	1-136-164-00	FILM	0.082uF	5%	50V
C223	1-126-049-11	ELECT	22uF	20%	25V	C325	1-126-301-11	ELECT	1uF	20%	50V
C224	1-164-159-11	CERAMIC	0.1uF		50V	C328	1-126-049-11	ELECT	22uF	20%	25V
C225	1-126-022-11	ELECT	47uF	20%	10V	C329	1-126-022-11	ELECT	47uF	20%	16V
C226	1-164-159-11	CERAMIC	0.1uF		50V	C351	1-164-068-11	CERAMIC	82PF	5%	50V
C227	1-126-301-11	ELECT	1uF	20%	50V	C352	1-161-375-00	CERAMIC	0.0022uF	20%	50V
C228	1-124-478-11	ELECT	100uF	20%	25V	C353	1-126-022-11	ELECT	47uF	20%	10V
C229	1-136-171-00	FILM	0.33uF	5%	50V	C354	1-164-057-11	CERAMIC	30PF	5%	50V
C230	1-136-165-00	FILM	0.1uF	5%	50V	C355	1-164-057-11	CERAMIC	30PF	5%	50V
C231	1-126-301-11	ELECT	1uF	20%	50V	C356	1-106-359-00	MYLAR	4700PF	5%	200V
C232	1-136-159-00	FILM	0.033uF	5%	50V	C357	1-130-472-00	MYLAR	0.0012uF	5%	50V
C233	1-136-158-00	FILM	0.027uF	5%	50V	C358	1-126-022-11	ELECT	47uF	20%	16V
C234	1-106-359-00	MYLAR	4700PF	5%	200V	C359	1-164-066-11	CERAMIC	68PF	5%	50V
C235	1-130-482-00	MYLAR	0.0082uF	5%	50V	C360	1-126-022-11	ELECT	47uF	20%	16V
C236	1-126-049-11	ELECT	22uF	20%	25V	C361-363					
C237	1-124-478-11	ELECT	100uF	20%	25V		1-126-301-11	ELECT	1uF	20%	50V
C238	1-126-301-11	ELECT	1uF	20%	50V	C364	1-126-049-11	ELECT	22uF	20%	25V
C239	1-126-301-11	ELECT	1uF	20%	50V	C366	1-164-066-11	CERAMIC	68PF	5%	50V
C240	1-164-013-11	CERAMIC	4PF	0.25PF	50V	C367	1-126-049-11	ELECT	22uF	20%	25V
C241	1-164-015-11	CERAMIC	6PF	0.5PF	50V	C368	1-126-022-11	ELECT	47uF	20%	16V
C242	1-126-163-11	ELECT	4.7uF	20%	50V	C369	1-164-066-11	CERAMIC	68PF	5%	50V
C243	1-164-159-11	CERAMIC	0.1uF		50V	C373	1-136-841-81	FILM	0.39uF	5%	50V
C244	1-162-294-31	CERAMIC	0.001uF	10%	50V	C374	1-136-164-00	FILM	0.082uF	5%	50V
C245	1-162-294-31	CERAMIC	0.001uF	10%	50V	C375	1-126-301-11	ELECT	1uF	20%	50V
C246	1-162-286-31	CERAMIC	220PF	10%	50V	C378	1-126-049-11	ELECT	22uF	20%	25V
C247	1-162-286-31	CERAMIC	220PF	10%	50V	C379	1-126-022-11	ELECT	47uF	20%	16V
C248	1-162-286-31	CERAMIC	220PF	10%	50V	C401	1-106-347-00	MYLAR	1500PF	5%	200V
C249	1-164-159-11	CERAMIC	0.1uF		50V	C402	1-130-478-00	MYLAR	0.0039uF	5%	50V
C250	1-162-286-31	CERAMIC	220PF	10%	50V	C403	1-164-077-11	CERAMIC	220PF	10%	50V
C251	1-162-286-31	CERAMIC	220PF	10%	50V	C404	1-126-022-11	ELECT	47uF	20%	16V
C253	1-164-159-11	CERAMIC	0.1uF		50V	C405	1-126-049-11	ELECT	22uF	20%	25V
	(TA-D709E:AEP) (TYPE III, IV)				C406-408						
C301	1-164-068-11	CERAMIC	82PF	5%	50V		1-126-059-11	ELECT	10uF	20%	50V
C302	1-161-375-00	CERAMIC	0.0022uF	20%	50V	C409	1-126-300-11	ELECT	0.47uF	20%	50V
C303	1-126-022-11	ELECT	47uF	20%	10V	C410	1-126-022-11	ELECT	47uF	20%	16V
C304	1-164-057-11	CERAMIC	30PF	5%	50V	C411	1-126-163-11	ELECT	4.7uF	20%	50V
C305	1-164-057-11	CERAMIC	30PF	5%	50V	C412	1-126-163-11	ELECT	4.7uF	20%	50V
C306	1-106-359-00	MYLAR	4700PF	5%	200V	C451	1-106-347-00	MYLAR	1500PF	5%	200V
C307	1-130-472-00	MYLAR	0.0012uF	5%	50V	C452	1-130-478-00	MYLAR	0.0039uF	5%	50V
C308	1-126-022-11	ELECT	47uF	20%	16V						

MAIN

Ref. No.	Part No.	Description	Remark		Ref. No.	Part No.	Description	Remark
C453	1-164-077-11	CERAMIC	220PF	10%	50V			< CONNECTOR >
C454	1-126-022-11	ELECT	47uF	20%	16V			* CN1 1-564-321-00 PIN, CONNECTOR 2P
C455	1-126-049-11	ELECT	22uF	20%	25V			* CN101 1-566-858-41 SOCKET, CONNECTOR 11P (SYSTEM CONTROL 1)
C456-458								* CN102 1-564-507-11 PLUG, CONNECTOR 4P
	1-126-059-11	ELECT	10uF	20%	50V			CN201 1-564-510-11 PLUG, CONNECTOR 7P
C459	1-126-300-11	ELECT	0.47uF	20%	50V			* CN301 1-564-506-11 PLUG, CONNECTOR 3P
C460	1-126-022-11	ELECT	47uF	20%	16V			* CN401 1-566-858-31 SOCKET, CONNECTOR 11P (SYSTEM CONTROL 3)
C461	1-126-163-11	ELECT	4.7uF	20%	50V			* CN402 1-564-506-11 PLUG, CONNECTOR 3P
C462	1-126-163-11	ELECT	4.7uF	20%	50V			* CN501 1-565-561-11 PIN, CONNECTOR 3P (AU BUS)
C501	1-126-022-11	ELECT	47uF	20%	10V			* CN502 1-568-836-11 SOCKET, CONNECTOR 17P
C502	1-164-159-11	CERAMIC	0.1uF		50V			CN803 1-564-505-11 PLUG, CONNECTOR 2P (TA-D709E:AEP)
C702	1-124-920-11	ELECT	330uF	20%	63V			(TYPE III, IV)
C703	1-126-233-11	ELECT	22uF	20%	50V			* CNJ101 1-573-978-11 CONNECTOR, BOARD TO BOARD 11P
C704	1-124-122-11	ELECT	100uF	20%	50V			* CNJ102 1-573-978-11 CONNECTOR, BOARD TO BOARD 11P
C705	1-126-860-11	ELECT	3300uF	20%	35V			* CNP103 1-565-967-11 PIN, CONNECTOR (PC BOARD) 5P
C706	1-126-860-11	ELECT	3300uF	20%	35V			CNP801 1-569-493-11 SOCKET, CONNECTOR 7P
C707	1-126-012-11	ELECT	470uF	20%	16V			< DIODE >
C708	1-126-012-11	ELECT	470uF	20%	16V			D301-303
C709	1-124-443-00	ELECT	100uF	20%	10V			8-719-987-63 DIODE 1N4148M
C710	1-164-159-11	CERAMIC	0.1uF		50V			D351-353
C711	1-124-887-00	ELECT	3300uF	20%	16V			8-719-987-63 DIODE 1N4148M
C712	1-126-022-11	ELECT	47uF	20%	16V			D701-712
C713	1-124-463-00	ELECT	0.1uF	20%	50V			8-719-200-82 DIODE 11ES2
C714	1-136-161-00	FILM	0.047uF	5%	50V			D713 8-719-002-30 DIODE UZL-22H
C715	1-124-994-11	ELECT	100uF	20%	10V			D714 8-719-014-98 DIODE UZP-8.2B
C716	1-161-377-00	CERAMIC	0.0047uF	30%	50V			D715 8-719-200-82 DIODE 11ES2
C717	1-161-377-00	CERAMIC (TYPE I, II)	0.0047uF	30%	50V			D717 8-719-200-82 DIODE 11ES2
C717	1-161-377-00	CERAMIC (TA-A77E/TA-D709E:UK) (TYPE III, IV)	0.0047uF	30%	50V			D718 8-719-200-82 DIODE 11ES2
C717	1-164-159-11	CERAMIC (TA-D709E:AEP, G, IT, EE) (TYPE III, IV)	0.1uF		50V			D719 8-719-987-63 DIODE 1N4148M
C718	1-161-377-00	CERAMIC (TYPE I, II)	0.0047uF	30%	50V			D720 8-719-987-63 DIODE 1N4148M
C718	1-161-377-00	CERAMIC (TA-A77E/TA-D709E:UK) (TYPE III, IV)	0.0047uF	30%	50V			D721 8-719-002-30 DIODE UZL-22H
								D722 8-719-000-84 DIODE UZL-7M1
								< COIL >
C718	1-164-159-11	CERAMIC (TA-D709E:AEP, G, IT, EE) (TYPE III, IV)	0.1uF		50V			FB201-204
C719	1-161-377-00	CERAMIC	0.0047uF	30%	50V			1-412-473-21 INDUCTOR OOH
C722	1-126-059-11	ELECT	10uF	20%	50V			FB205 1-412-473-51 INDUCTOR OOH (TA-D709E:AEP)
C723	1-126-059-11	ELECT	10uF	20%	50V			(TYPE III, IV)
C724	1-124-910-11	ELECT	47uF	20%	50V			< IC >
C725	1-124-910-11	ELECT	47uF	20%	50V			IC102 8-759-711-35 IC NJM4580D
C726	1-136-165-00	FILM (TA-D709E:AEP, G, IT, EE) (TYPE II, III, IV)	0.1uF	5%	50V			IC201 8-759-504-36 IC CS5339-KP
C727	1-136-165-00	FILM (TA-D709E:AEP, G, IT, EE) (TYPE II, III, IV)	0.1uF	5%	50V			IC202 8-759-075-34 IC LC83015
								IC203 8-759-158-10 IC CAT514256B-70RS
								IC204 8-752-359-50 IC CXD2564AM
								IC205 8-759-040-59 IC LC7883K
								IC206 8-759-823-24 IC LA2730
								IC207 8-759-801-01 IC LC4966

Ref. No.	Part No.	Description	Remark
IC208	8-759-801-01	IC LC4966	
IC301	8-759-634-51	IC M5218AP (TYPE I)	
IC301	8-759-711-35	IC NJM4580D (TYPE II, III, IV)	
IC302-305	8-759-634-51	IC M5218AP	
IC401	8-759-634-51	IC M5218AP	
IC402	8-759-634-51	IC M5218AP	
IC403	8-759-820-11	IC LC7535	
IC404	8-759-634-51	IC M5218AP	
IC501	8-759-171-73	IC UPD78014CW-015	
IC701	8-759-231-59	IC TA7815S	
IC702	8-759-245-87	IC TA7915S	
IC703	8-759-231-53	IC TA7805S	
IC704	8-759-245-79	IC TA79005S	
IC705	8-759-820-13	IC L78MR06	

< JACK >

J201 1-565-352-51 JACK, PIN 2P (CENTER OUT)

< COIL >

L201	1-408-417-00	INDUCTOR	47uH
L202	1-410-517-11	INDUCTOR	47uH
L203	1-408-417-00	INDUCTOR	47uH (TYPE I, II)
L203	1-408-417-00	INDUCTOR	47uH (TA-A77E/TA-D709E:UK, G, IT, EE) (TYPE III, IV)
L204	1-408-417-00	INDUCTOR	47uH

< LINE FILTER >

△LF1 1-424-117-11 FILTER, LINE

< IC LINK >

△PS701	1-532-835-41	LINK, IC (PRF400)	0.4A
△PS702	1-532-840-41	LINK, IC (PRF1250)	1.25A
△PS703	1-532-840-41	LINK, IC (PRF1250)	1.25A
△PS704	1-532-845-21	LINK, IC (PRF4000)	4A

< TRANSISTOR >

Q201	8-729-900-80	TRANSISTOR	DTC114ES
Q202-212	8-729-900-63	TRANSISTOR	DTA124ES
Q213	8-729-620-05	TRANSISTOR	2SC2603-EF
Q214	8-729-900-63	TRANSISTOR	DTA124ES
Q215	8-729-141-26	TRANSISTOR	2SC3622A-LK
Q216	8-729-900-63	TRANSISTOR	DTA124ES
Q217	8-729-620-05	TRANSISTOR	2SC2603-EF
Q301-303	8-729-141-26	TRANSISTOR	2SC3622A-LK
Q304-306	8-729-224-61	TRANSISTOR	2SK246-Y

Ref. No.	Part No.	Description	Remark
Q307-311	8-729-141-26	TRANSISTOR	2SC3622A-LK
Q351-353	8-729-141-26	TRANSISTOR	2SC3622A-LK
Q354-356	8-729-224-61	TRANSISTOR	2SK246-Y
Q357-361	8-729-141-26	TRANSISTOR	2SC3622A-LK
Q401-403	8-729-231-55	TRANSISTOR	2SC2878-AB
Q451-453	8-729-231-55	TRANSISTOR	2SC2878-AB
Q701	8-729-209-15	TRANSISTOR	2SD2012
Q704	8-729-900-80	TRANSISTOR	DTC114ES
Q705	8-729-119-76	TRANSISTOR	2SA1175-HFE

< RESISTOR >

R120	1-249-417-11	CARBON	1K 5% 1/4W
R121	1-247-903-00	CARBON	1M 5% 1/4W
R122	1-249-417-11	CARBON	1K 5% 1/4W
R123	1-247-903-00	CARBON	1M 5% 1/4W
R124	1-247-903-00	CARBON	1M 5% 1/4W
R125	1-249-417-11	CARBON	1K 5% 1/4W
R126	1-249-437-11	CARBON	47K 5% 1/4W
R127	1-249-438-11	CARBON	56K 5% 1/4W
R128	1-249-437-11	CARBON	47K 5% 1/4W
R129	1-249-401-11	CARBON	47 5% 1/4W
R130	1-247-807-31	CARBON	100 5% 1/4W
R131	1-249-413-11	CARBON	470 5% 1/4W
R137	1-249-435-11	CARBON	33K 5% 1/4W
R138	1-249-435-11	CARBON	33K 5% 1/4W
R170	1-249-417-11	CARBON	1K 5% 1/4W
R171	1-247-903-00	CARBON	1M 5% 1/4W
R172	1-249-417-11	CARBON	1K 5% 1/4W
R173	1-247-903-00	CARBON	1M 5% 1/4W
R174	1-247-903-00	CARBON	1M 5% 1/4W
R175	1-249-417-11	CARBON	1K 5% 1/4W
R176	1-249-437-11	CARBON	47K 5% 1/4W
R177	1-249-438-11	CARBON	56K 5% 1/4W
R178	1-249-437-11	CARBON	47K 5% 1/4W
R179	1-249-401-11	CARBON	47 5% 1/4W
R180	1-247-807-31	CARBON	100 5% 1/4W
R181	1-249-413-11	CARBON	470 5% 1/4W
R187	1-249-435-11	CARBON	33K 5% 1/4W
R188	1-249-435-11	CARBON	33K 5% 1/4W
R201	1-247-895-00	CARBON	470K 5% 1/4W
R203	1-249-413-11	CARBON	470 5% 1/4W
R204	1-249-393-11	CARBON	10 5% 1/4W
R206	1-249-393-11	CARBON	10 5% 1/4W
R207	1-249-397-11	CARBON	22 5% 1/4W

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MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R208	1-249-413-11	CARBON	470 5% 1/4W	R306	1-249-439-11	CARBON	68K 5% 1/4W
R209	1-249-413-11	CARBON	470 5% 1/4W	R307-309	1-249-419-11	CARBON	1.5K 5% 1/4W
R210	1-249-397-11	CARBON	22 5% 1/4W	R310	1-249-441-11	CARBON	100K 5% 1/4W
R211	1-247-862-11	CARBON	20K 5% 1/4W	R311	1-249-441-11	CARBON	100K 5% 1/4W
R212	1-249-429-11	CARBON (TYPE I)	10K 5% 1/4W	R312	1-249-426-11	CARBON	5.6K 5% 1/4W
R212	1-249-431-11	CARBON (TYPE II, III, IV)	15K 5% 1/4W	R313	1-249-425-11	CARBON	4.7K 5% 1/4W
R213	1-247-889-00	CARBON	270K 5% 1/4W	R314	1-249-425-11	CARBON	4.7K 5% 1/4W
R214	1-247-850-11	CARBON	6.2K 5% 1/4W	R315	1-249-419-11	CARBON	1.5K 5% 1/4W
R215	1-249-437-11	CARBON	47K 5% 1/4W	R316	1-247-842-11	CARBON	3K 5% 1/4W
R216	1-249-423-11	CARBON	3.3K 5% 1/4W	R317	1-249-425-11	CARBON	4.7K 5% 1/4W
R217	1-247-889-00	CARBON	270K 5% 1/4W	R318	1-249-414-11	CARBON	560 5% 1/4W
R218	1-249-408-11	CARBON	180 5% 1/4W	R319	1-247-838-00	CARBON	2K 5% 1/4W
R219	1-249-430-11	CARBON	12K 5% 1/4W	R320	1-249-425-11	CARBON	4.7K 5% 1/4W
R220	1-249-417-11	CARBON	1K 5% 1/4W	R321	1-249-433-11	CARBON (TYPE I)	22K 5% 1/4W
R221	1-249-429-11	CARBON	10K 5% 1/4W	R321	1-249-434-11	CARBON (TYPE II, III, IV)	27K 5% 1/4W
R222	1-249-431-11	CARBON	15K 5% 1/4W	R322	1-249-433-11	CARBON	22K 5% 1/4W
R223	1-249-434-11	CARBON	27K 5% 1/4W	R325	1-249-433-11	CARBON	22K 5% 1/4W
R224	1-249-433-11	CARBON	22K 5% 1/4W	R326	1-249-429-11	CARBON	10K 5% 1/4W
R225	1-249-427-11	CARBON	6.8K 5% 1/4W	R327	1-249-417-11	CARBON	1K 5% 1/4W
R226	1-249-437-11	CARBON	47K 5% 1/4W	R328	1-249-441-11	CARBON	100K 5% 1/4W
R227	1-249-437-11	CARBON	47K 5% 1/4W	R329	1-249-431-11	CARBON	15K 5% 1/4W
R228	1-249-413-11	CARBON	470 5% 1/4W	R330	1-249-435-11	CARBON	33K 5% 1/4W
R229	1-249-441-11	CARBON	100K 5% 1/4W	R332	1-249-431-11	CARBON	15K 5% 1/4W
R230	1-249-425-11	CARBON	4.7K 5% 1/4W	R334	1-249-426-11	CARBON	5.6K 5% 1/4W
R231-240	1-249-441-11	CARBON	100K 5% 1/4W	R336	1-249-419-11	CARBON	1.5K 5% 1/4W
R241	1-249-437-11	CARBON	47K 5% 1/4W	R337	1-249-436-11	CARBON	39K 5% 1/4W
R242	1-249-437-11	CARBON	47K 5% 1/4W	R338	1-247-884-11	CARBON	160K 5% 1/4W
R243	1-249-413-11	CARBON	470 5% 1/4W	R339	1-249-425-11	CARBON	4.7K 5% 1/4W
R244-247	1-249-417-11	CARBON	1K 5% 1/4W	R340	1-249-441-11	CARBON	100K 5% 1/4W
R248	1-249-437-11	CARBON	47K 5% 1/4W	R341	1-249-425-11	CARBON	4.7K 5% 1/4W
R249	1-249-411-11	CARBON	330 5% 1/4W	R342	1-249-436-11	CARBON	39K 5% 1/4W
R250	1-249-429-11	CARBON	10K 5% 1/4W	R343	1-249-425-11	CARBON	4.7K 5% 1/4W
R251	1-249-425-11	CARBON	4.7K 5% 1/4W	R344	1-249-427-11	CARBON	6.8K 5% 1/4W
R252	1-249-441-11	CARBON	100K 5% 1/4W	R345	1-249-412-11	CARBON	390 5% 1/4W
R253	1-249-433-11	CARBON	22K 5% 1/4W	R346	1-249-419-11	CARBON	1.5K 5% 1/4W
R254	1-249-433-11	CARBON	22K 5% 1/4W	R347	1-249-431-11	CARBON	15K 5% 1/4W
R255	1-247-807-31	CARBON	100 5% 1/4W	R351	1-249-435-11	CARBON	33K 5% 1/4W
R256	1-249-397-11	CARBON	22 5% 1/4W	R352	1-249-435-11	CARBON	33K 5% 1/4W
R257	1-249-397-11	CARBON	22 5% 1/4W	R353	1-249-432-11	CARBON	18K 5% 1/4W
R271-273	1-249-438-11	CARBON	56K 5% 1/4W	R354	1-249-439-11	CARBON	68K 5% 1/4W
R301	1-249-435-11	CARBON	33K 5% 1/4W	R355	1-249-432-11	CARBON	18K 5% 1/4W
R302	1-249-435-11	CARBON	33K 5% 1/4W	R356	1-249-439-11	CARBON	68K 5% 1/4W
R303	1-249-432-11	CARBON	18K 5% 1/4W	R357-359	1-249-419-11	CARBON	1.5K 5% 1/4W
R304	1-249-439-11	CARBON	68K 5% 1/4W	R360	1-249-441-11	CARBON	100K 5% 1/4W
R305	1-249-432-11	CARBON	18K 5% 1/4W	R361	1-249-441-11	CARBON	100K 5% 1/4W

MAIN

MICROPHONE AMPLIFIER

Ref. No.	Part No.	Description	Remark
R362	1-249-426-11	CARBON	5.6K 5% 1/4W
R363	1-249-425-11	CARBON	4.7K 5% 1/4W
R364	1-249-425-11	CARBON	4.7K 5% 1/4W
R365	1-249-419-11	CARBON	1.5K 5% 1/4W
R366	1-247-842-11	CARBON	3K 5% 1/4W
R367	1-249-425-11	CARBON	4.7K 5% 1/4W
R368	1-249-414-11	CARBON	560 5% 1/4W
R369	1-247-838-00	CARBON	2K 5% 1/4W
R370	1-249-425-11	CARBON	4.7K 5% 1/4W
R371	1-249-433-11	CARBON (TYPE I)	22K 5% 1/4W
R371	1-249-434-11	CARBON (TYPE II, III, IV)	27K 5% 1/4W
R372	1-249-433-11	CARBON	22K 5% 1/4W
R375	1-249-433-11	CARBON	22K 5% 1/4W
R376	1-249-429-11	CARBON	10K 5% 1/4W
R377	1-249-417-11	CARBON	1K 5% 1/4W
R378	1-249-441-11	CARBON	100K 5% 1/4W
R379	1-249-431-11	CARBON	15K 5% 1/4W
R380	1-249-435-11	CARBON	33K 5% 1/4W
R382	1-249-431-11	CARBON	15K 5% 1/4W
R384	1-249-426-11	CARBON	5.6K 5% 1/4W
R386	1-249-419-11	CARBON	1.5K 5% 1/4W
R387	1-249-436-11	CARBON	39K 5% 1/4W
R388	1-247-884-11	CARBON	160K 5% 1/4W
R389	1-249-425-11	CARBON	4.7K 5% 1/4W
R390	1-249-441-11	CARBON	100K 5% 1/4W
R391	1-249-425-11	CARBON	4.7K 5% 1/4W
R392	1-249-436-11	CARBON	39K 5% 1/4W
R393	1-249-425-11	CARBON	4.7K 5% 1/4W
R394	1-249-427-11	CARBON	6.8K 5% 1/4W
R395	1-249-412-11	CARBON	390 5% 1/4W
R396	1-249-419-11	CARBON	1.5K 5% 1/4W
R397	1-249-431-11	CARBON	15K 5% 1/4W
R401-403	1-249-423-11	CARBON	3.3K 5% 1/4W
R404	1-249-422-11	CARBON	2.7K 5% 1/4W
R405	1-249-441-11	CARBON	100K 5% 1/4W
R406	1-249-419-11	CARBON	1.5K 5% 1/4W
R407	1-249-430-11	CARBON	12K 5% 1/4W
R408	1-249-441-11	CARBON	100K 5% 1/4W
R409	1-249-419-11	CARBON	1.5K 5% 1/4W
R410	1-249-431-11	CARBON	15K 5% 1/4W
R411	1-249-415-11	CARBON	680 5% 1/4W
R412	1-249-412-11	CARBON	390 5% 1/4W
R413	1-249-425-11	CARBON	4.7K 5% 1/4W
R414	1-249-413-11	CARBON	470 5% 1/4W
R415	1-249-441-11	CARBON	100K 5% 1/4W
R416	1-249-425-11	CARBON	4.7K 5% 1/4W

Ref. No.	Part No.	Description	Remark
R451-453	1-249-423-11	CARBON	3.3K 5% 1/4W
R454	1-249-417-11	CARBON	1K 5% 1/4W
R455	1-249-441-11	CARBON	100K 5% 1/4W
R456	1-249-419-11	CARBON	1.5K 5% 1/4W
R457	1-249-430-11	CARBON	12K 5% 1/4W
R458	1-249-441-11	CARBON	100K 5% 1/4W
R459	1-249-419-11	CARBON	1.5K 5% 1/4W
R460	1-249-431-11	CARBON	15K 5% 1/4W
R461	1-249-413-11	CARBON	470 5% 1/4W
R462	1-249-441-11	CARBON	100K 5% 1/4W
R463	1-249-425-11	CARBON	4.7K 5% 1/4W
R464	1-249-413-11	CARBON	470 5% 1/4W
R465	1-249-441-11	CARBON	100K 5% 1/4W
R466	1-249-425-11	CARBON	4.7K 5% 1/4W
R501-508	1-249-417-11	CARBON	1K 5% 1/4W
R509	1-249-409-11	CARBON	220 5% 1/4W
R510	1-249-409-11	CARBON	220 5% 1/4W
R511-516	1-249-417-11	CARBON	1K 5% 1/4W
R701	1-260-108-81	CARBON	5.6K 5% 1/2W
R706	1-249-425-11	CARBON	4.7K 5% 1/4W
R707	1-249-441-11	CARBON	100K 5% 1/4W
R708	1-249-429-11	CARBON	10K 5% 1/4W
R709	1-249-433-11	CARBON	22K 5% 1/4W
R710	1-249-433-11	CARBON	22K 5% 1/4W
< SWITCH >			
△S701 1-572-716-11 SWITCH, PUSH (AC POWER) (POWER)			
< VIBRATOR >			
X201	1-567-970-11	VIBRATOR, CRYSTAL (24MHz)	
X501	1-579-599-21	VIBRATOR, CERAMIC (8.38MHz)	

* 1-648-176-11 MICROPHONE AMPLIFIER BOARD			

< CAPACITOR >			
C901	1-126-161-11	ELECT	2.2uF 20% 50V
C902	1-164-088-11	CERAMIC	0.001uF 50V
C903	1-162-219-31	CERAMIC	68PF 5% 50V
C904	1-162-284-31	CERAMIC	150PF 10% 50V
C905	1-124-463-00	ELECT	0.1uF 20% 50V
C906	1-126-161-11	ELECT	2.2uF 20% 50V
C907	1-162-219-31	CERAMIC	68PF 5% 50V
C908	1-161-375-00	CERAMIC	0.0022uF 20% 50V
C909	1-136-163-00	FILM	0.068uF 5% 50V
C910	1-126-022-11	ELECT	47uF 20% 16V

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

MICROPHONE AMPLIFIER PANEL

Ref. No.	Part No.	Description	Remark
C911	1-126-022-11	ELECT	47uF 20% 16V
C912	1-164-159-11	CERAMIC	0.1uF 50V

< CONNECTOR >

* CN901 1-564-507-11 PLUG, CONNECTOR 4P

< IC >

IC901 8-759-184-02 IC NJM2068L-D

< JACK >

J901 1-507-854-00 JACK, PHONE (MIC)

< RESISTOR >

R901 1-249-441-11 CARBON 100K 5% 1/4W

R902 1-249-417-11 CARBON 1K 5% 1/4W

R903 1-249-429-11 CARBON 10K 5% 1/4W

R904 1-249-414-11 CARBON 560 5% 1/4W

R905 1-249-429-11 CARBON 10K 5% 1/4W

R906 1-249-417-11 CARBON 1K 5% 1/4W

R907 1-249-441-11 CARBON 100K 5% 1/4W

R908 1-249-413-11 CARBON 470 5% 1/4W

R909 1-249-429-11 CARBON 10K 5% 1/4W

R910 1-249-416-11 CARBON 820 5% 1/4W

< VARIABLE RESISTOR >

RV901 1-223-334-11 RES, VAR, CARBON 50K (MIC LEVEL)

* A-4360-769-A PANEL BOARD, COMPLETE (TA-D709E)
* A-4360-952-A PANEL BOARD, COMPLETE (TA-A77E)

* 4-934-853-01 CUSHION

* 4-957-917-01 HOLDER, FL TUBE

< CAPACITOR >

C601 1-104-905-11 DOUBLE LAYERS 0.22F 5.5V

C602 1-161-494-00 CERAMIC 0.022uF 25V

C603 1-161-494-00 CERAMIC 0.022uF 25V

C604 1-126-177-11 ELECT 100uF 20% 10V

C605 1-164-159-11 CERAMIC 0.1uF 50V

C606 1-164-159-11 CERAMIC 0.1uF 50V

< CONNECTOR >

* CN601 1-568-836-11 SOCKET, CONNECTOR 17P

* CN602 1-568-826-11 SOCKET, CONNECTOR 7P

Ref. No.	Part No.	Description	Remark
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< DIODE >

D601 8-719-987-63 DIODE 1N4148M

D602 8-719-000-84 DIODE UZL-7M1

D603-611

8-719-987-63 DIODE 1N4148M

D612 8-719-018-46 LED SEL3510C-CD (V-VIDEO 1/MD)

D613 8-719-018-46 LED SEL3510C-CD (V-VIDEO 2)

D614 8-719-018-46 LED SEL3510C-CD (V-VIDEO 3)

D615 8-719-313-69 LED SEL3210S-CD (A-VIDEO 1/MD)

D616 8-719-313-69 LED SEL3210S-CD (A-VIDEO 2)

D617 8-719-313-69 LED SEL3210S-CD (A-VIDEO 3)

D618 8-719-313-69 LED SEL3210S-CD (CD)

D619 8-719-313-69 LED SEL3210S-CD (TUNER)

D620 8-719-313-69 LED SEL3210S-CD (TAPE)

D621 8-719-313-69 LED SEL3210S-CD (PHONO)

D622 8-719-313-69 LED SEL3210S-CD (KARAOKE PON)
(TA-A77E)

D623 8-719-313-69 LED SEL3210S-CD (P. FUNCTION)

D624 8-719-313-69 LED SEL3210S-CD (SELECT 10)

D625 8-719-313-69 LED SEL3210S-CD (MORE 10)

D626 8-719-313-69 LED SEL3210S-CD (P. FILE)

D627 8-719-313-69 LED SEL3210S-CD (DIGITAL EFFECT)

< FLUORESCENT INDICATOR >

FL601 1-517-167-11 INDICATOR TUBE, FLUORESCENT

< IC >

IC601 8-759-171-72 IC UPD78012CW-033

IC602 8-759-075-35 IC TD62C950RF

IC603 8-759-075-35 IC TD62C950RF

< TRANSISTOR >

Q601 8-729-620-05 TRANSISTOR 2SC2603-EF

Q602 8-729-620-05 TRANSISTOR 2SC2603-EF

Q603-605

8-729-119-76 TRANSISTOR 2SA1175-HFE

Q606-611

8-729-620-05 TRANSISTOR 2SC2603-EF

< RESISTOR >

R601 1-249-434-11 CARBON 27K 5% 1/4W

R603 1-249-429-11 CARBON 10K 5% 1/4W

R604 1-249-429-11 CARBON 10K 5% 1/4W

R605 1-249-417-11 CARBON 1K 5% 1/4W

R606 1-249-425-11 CARBON 4.7K 5% 1/4W

R607 1-249-429-11 CARBON 10K 5% 1/4W

R608 1-249-393-11 CARBON 10 5% 1/4W

R609 1-249-421-11 CARBON 2.2K 5% 1/4W

R610 1-249-421-11 CARBON 2.2K 5% 1/4W

Ref. No.	Part No.	Description			Remark
R612-614					
	1-249-417-11	CARBON	1K	5%	1/4W
R615	1-249-427-11	CARBON	6.8K	5%	1/4W
R617	1-249-427-11	CARBON	6.8K	5%	1/4W
R619	1-249-427-11	CARBON	6.8K	5%	1/4W
R621	1-249-427-11	CARBON	6.8K	5%	1/4W
R623	1-249-427-11	CARBON	6.8K	5%	1/4W
R625	1-249-427-11	CARBON	6.8K	5%	1/4W
R627-633					
	1-249-433-11	CARBON	22K	5%	1/4W
R634	1-249-400-11	CARBON	39	5%	1/4W
R635-637					
	1-249-404-00	CARBON	82	5%	1/4W
R638	1-249-404-00	CARBON	82	5%	1/4W
	(TA-A77E)				
R639-641					
	1-249-404-00	CARBON	82	5%	1/4W
R642	1-249-433-11	CARBON	22K	5%	1/4W
R643	1-249-429-11	CARBON	10K	5%	1/4W
R644	1-249-417-11	CARBON	1K	5%	1/4W
R645	1-249-433-11	CARBON	22K	5%	1/4W
R646-648					
	1-249-423-11	CARBON	3.3K	5%	1/4W
R649-651					
	1-249-429-11	CARBON	10K	5%	1/4W
R652	1-249-409-11	CARBON	220	5%	1/4W
	(TA-D709E) (TYPE III, IV)				
R653	1-249-409-11	CARBON	220	5%	1/4W
	(TA-D709E) (TYPE III, IV)				
R654	1-249-409-11	CARBON	220	5%	1/4W
	(TA-D709E) (TYPE III, IV)				

< SWITCH >

S601	1-554-303-21	SWITCH, TACTILE (KARAOKE PON) (TA-A77E)			
S602	1-554-303-21	SWITCH, TACTILE (DIGITAL EFFECT)			
S603	1-554-303-21	SWITCH, TACTILE (P. FUNCTION)			
S604	1-554-303-21	SWITCH, TACTILE (DISPLAY)			
S605	1-554-303-21	SWITCH, TACTILE (DBS LEVEL)			
S606	1-554-303-21	SWITCH, TACTILE (DBS FREQUENCY)			
S607	1-554-303-21	SWITCH, TACTILE (1)			
S608	1-554-303-21	SWITCH, TACTILE (2)			
S609	1-554-303-21	SWITCH, TACTILE (3)			
S610	1-554-303-21	SWITCH, TACTILE (4)			
S611	1-554-303-21	SWITCH, TACTILE (5)			
S612	1-554-303-21	SWITCH, TACTILE (6)			
S613	1-554-303-21	SWITCH, TACTILE (7)			
S614	1-554-303-21	SWITCH, TACTILE (8)			
S615	1-554-303-21	SWITCH, TACTILE (9)			
S616	1-554-303-21	SWITCH, TACTILE (10)			
S617	1-554-303-21	SWITCH, TACTILE (SELECT 10)			

Ref. No.	Part No.	Description			Remark
S618	1-554-303-21	SWITCH, TACTILE (MORE 10)			
S619	1-554-303-21	SWITCH, TACTILE (P. FILE)			
S620	1-554-303-21	SWITCH, TACTILE (MEMORY)			
S621	1-554-303-21	SWITCH, TACTILE (EFFECT LEVEL)			
S622	1-554-303-21	SWITCH, TACTILE (ACOUSTIC CONT)			
S623	1-554-303-21	SWITCH, TACTILE (CHARACTER EDIT)			
S624	1-554-303-21	SWITCH, TACTILE (PROLOGIC MODE)			
S625	1-554-303-21	SWITCH, TACTILE (CONTROL (SURROUND))			
S626	1-554-303-21	SWITCH, TACTILE (ON/OFF)			
S627	1-554-303-21	SWITCH, TACTILE (BAND (EQUALIZER))			
S628	1-554-303-21	SWITCH, TACTILE (SLOPE (EQUALIZER))			
S629	1-554-303-21	SWITCH, TACTILE (FLAT)			
S630	1-554-303-21	SWITCH, TACTILE (△ (CURSOR CONTROL))			
S631	1-554-303-21	SWITCH, TACTILE (◁ (CURSOR CONTROL))			
S632	1-554-303-21	SWITCH, TACTILE (▷ (CURSOR CONTROL))			
S633	1-554-303-21	SWITCH, TACTILE (▽ (CURSOR CONTROL))			
S634	1-554-303-21	SWITCH, TACTILE (VIDEO 1/MD)			
S635	1-554-303-21	SWITCH, TACTILE (VIDEO 2)			
S636	1-554-303-21	SWITCH, TACTILE (VIDEO 3)			
S637	1-554-303-21	SWITCH, TACTILE (TAPE)			
S638	1-554-303-21	SWITCH, TACTILE (CD)			
S639	1-554-303-21	SWITCH, TACTILE (TUNER)			
S640	1-554-303-21	SWITCH, TACTILE (PHONO)			
< VIBRATOR >					
X601	1-579-599-21	VIBRATOR, CERAMIC (8.38MHz)			

* 1-648-180-11 VIDEO (3) BOARD

< CAPACITOR >

C135	1-162-286-31	CERAMIC (TA-D709E)	220PF	10%	50V
C136	1-126-049-11	ELECT	22uF	20%	25V
C185	1-162-286-31	CERAMIC (TA-D709E)	220PF	10%	50V
C186	1-126-049-11	ELECT	22uF	20%	25V
C931	1-126-059-11	ELECT	10uF	20%	50V
C932	1-164-159-11	CERAMIC (TA-D709E:AEP) (TYPE III, IV)	0.1uF		50V
C933	1-164-159-11	CERAMIC (TA-D709E:AEP) (TYPE III, IV)	0.1uF		50V

< CONNECTOR >

* CNJ103 1-565-970-11 SOCKET, CONNECTOR (PC BOARD) 5P

< JACK >

J931 1-580-174-41 JACK, PIN (3P FRONT) (VIDEO 3 IN)

VIDEO (3)

VIDEO FUNCTION

VOL

Ref. No.	Part No.	Description			Remark
< RESISTOR >					
R135	1-249-417-11	CARBON	1K	5%	1/4W
R136	1-247-903-00	CARBON	1M	5%	1/4W
R185	1-249-417-11	CARBON	1K	5%	1/4W
R186	1-247-903-00	CARBON	1M	5%	1/4W
R931	1-247-804-11	CARBON	75	5%	1/4W

* A-4360-771-A	VIDEO FUNCTION BOARD, COMPLETE				
		(TA-A77E/TA-D709E:UK, G, IT, EE)			
* A-4365-530-A	VIDEO FUNCTION BOARD, COMPLETE				
		(TA-D709E:AEP)			

< CAPACITOR >					
C801	1-126-059-11	ELECT	10uF	20%	50V
C802	1-126-059-11	ELECT	10uF	20%	50V
C804	1-124-471-00	ELECT	1000uF	20%	6.3V
C805	1-124-471-00	ELECT	1000uF	20%	6.3V
C806	1-124-471-00	ELECT	1000uF	20%	6.3V
C807	1-161-494-00	CERAMIC	0.022uF		25V
C808	1-126-049-11	ELECT	22uF	20%	25V
< CONNECTOR >					
CN802	1-564-505-11	PLUG, CONNECTOR 2P	(TA-D709E:AEP)		
		(TYPE III, IV)			
* CNJ801	1-569-502-11	PIN, CONNECTOR 7P			
< IC >					
IC801	8-759-061-95	IC	SN761200N		
< JACK >					
J801	1-568-751-51	JACK, PIN (2P SHIELD TYPE)	(VIDEO 1/MD)		
J802	1-568-752-51	JACK, PIN (3P SHIELD TYPE)	(VIDEO 2/MONITOR)		
< COIL >					
L801	1-410-521-11	INDUCTOR	100uH		
< TRANSISTOR >					
Q801-803	8-729-119-76	TRANSISTOR	2SA1175-HFE		
Q804	8-729-620-05	TRANSISTOR	2SC2603-EF		
< RESISTOR >					
R801	1-247-804-11	CARBON	75	5%	1/4W
R802	1-247-804-11	CARBON	75	5%	1/4W
R804	1-249-403-11	CARBON	68	5%	1/4W
R805	1-249-429-11	CARBON	10K	5%	1/4W

Ref. No.	Part No.	Description			Remark

R806	1-249-403-11	CARBON	68	5%	1/4W
R807	1-249-429-11	CARBON	10K	5%	1/4W
R808	1-249-403-11	CARBON	68	5%	1/4W
R809	1-249-429-11	CARBON	10K	5%	1/4W
R810-815	1-249-408-11	CARBON	180	5%	1/4W
R816	1-249-429-11	CARBON	10K	5%	1/4W
R817	1-249-417-11	CARBON	1K	5%	1/4W
R819	1-249-417-11	CARBON	1K	5%	1/4W

* A-4360-773-A	VOL BOARD, COMPLETE				
		(TA-A77E/TA-D709E:UK, EE)			
* A-4365-532-A	VOL BOARD, COMPLETE	(TA-D709E:AEP)			
* A-4365-533-A	VOL BOARD, COMPLETE	(TA-D709E:G, IT)			

< CAPACITOR >					
C251	1-161-494-00	CERAMIC	0.022uF		25V
C252	1-126-022-11	ELECT	47uF	20%	10V
C421	1-126-161-11	ELECT	2.2uF	20%	50V
C422	1-126-049-11	ELECT	22uF	20%	25V
C423	1-126-022-11	ELECT	47uF	20%	16V
C425	1-164-159-11	CERAMIC	0.1uF		50V
		(TA-D709E:AEP)	(TYPE III, IV)		
C431	1-126-161-11	ELECT	2.2uF	20%	50V
C432	1-126-049-11	ELECT	22uF	20%	25V
C433	1-162-286-31	CERAMIC	220PF	10%	50V
		(TA-D709E:G, IT)	(TYPE II, III, IV)		
C471	1-126-161-11	ELECT	2.2uF	20%	50V
C472	1-126-049-11	ELECT	22uF	20%	25V
C473	1-126-022-11	ELECT	47uF	20%	16V
C474	1-162-199-31	CERAMIC	10PF	5%	50V
C475	1-164-159-11	CERAMIC	0.1uF		50V
		(TA-D709E:AEP)	(TYPE III, IV)		
C481	1-126-161-11	ELECT	2.2uF	20%	50V
C482	1-126-049-11	ELECT	22uF	20%	25V
C483	1-162-286-31	CERAMIC	220PF	10%	50V
		(TA-D709E:G, IT)	(TYPE II, III, IV)		
< CONNECTOR >					
* CN251	1-564-506-11	PLUG, CONNECTOR 3P			
* CN252	1-564-506-11	PLUG, CONNECTOR 3P			
* CN253	1-568-826-11	SOCKET, CONNECTOR 7P			
CN254	1-564-510-11	PLUG, CONNECTOR 7P			
CN255	1-564-506-11	PLUG, CONNECTOR 3P			
< DIODE >					
D251	8-719-010-30	DIODE	UZ-4.3BSC		

Ref. No.	Part No.	Description	Remark
< IC >			
IC251	8-759-820-62	IC LB1639	
IC421	8-759-710-59	IC NJM4580D-D	
IC422	8-759-710-59	IC NJM4580D-D	
< TRANSISTOR >			
Q251	8-729-900-36	TRANSISTOR DTC124ES	
< RESISTOR >			
R251	1-249-412-11	CARBON 390 5% 1/4W	
R252	1-249-393-11	CARBON 10 5% 1/4W	
R253	1-249-413-11	CARBON 470 5% 1/4W	
R254	1-249-413-11	CARBON 470 5% 1/4W	
R421	1-249-441-11	CARBON 100K 5% 1/4W	
R422	1-249-434-11	CARBON 27K 5% 1/4W	
R423	1-249-426-11	CARBON 5.6K 5% 1/4W	
R424	1-249-441-11	CARBON 100K 5% 1/4W	
R425	1-249-403-11	CARBON 68 5% 1/4W	
R426	1-249-421-11	CARBON 2.2K 5% 1/4W	
R431	1-249-441-11	CARBON 100K 5% 1/4W	
R432	1-249-441-11	CARBON 100K 5% 1/4W	
R433	1-249-417-11	CARBON 1K 5% 1/4W	
R434	1-249-417-11	CARBON 1K 5% 1/4W	
R471	1-249-441-11	CARBON 100K 5% 1/4W	
R472	1-249-434-11	CARBON 27K 5% 1/4W	
R473	1-249-431-11	CARBON 15K 5% 1/4W	
R474	1-249-441-11	CARBON 100K 5% 1/4W	
R475	1-249-403-11	CARBON 68 5% 1/4W	
R476	1-249-421-11	CARBON 2.2K 5% 1/4W	
< VARIABLE RESISTOR >			
RV202	1-223-389-11	RES, VAR, CARBON 10K/100KX4 (VOLUME)	

Ref. No.	Part No.	Description	Remark
MISCELLANEOUS			
7	1-690-420-11	WIRE, FLAT TYPE (7 CORE) (TA-D709E:EE)	
7	1-690-635-11	WIRE, FLAT TYPE (7 CORE) (TA-A77E/TA-D709E:AEP, UK, G, IT)	
60	1-751-486-11	WIRE (FLAT TYPE) (17 CORE)	
△68	1-575-654-11	CORD, POWER (TA-A77E:EA, MY, SP/TA-D709E:AEP, G, IT, EE)	
△69	1-575-656-11	CORD, POWER (TA-A77E:E, JE)	
△70	1-575-669-21	CORD, POWER (TA-D709E:UK)	
△71	1-751-355-11	CORD, POWER (TA-A77E:AUS)	
△S901	1-570-046-21	SWITCH, VOLTAGE CHANGE (VOLTAGE SELECTOR) (TA-A77E)	
△T701	1-423-671-11	TRANSFORMER, POWER (TA-D709E)	
△T701	1-423-672-11	TRANSFORMER, POWER (TA-A77E)	

HARDWARE LIST

#1	7-682-547-09	SCREW +BVTT 3X6 (S)
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#3	7-682-548-04	SCREW +BVTT 3X8 (S)
#4	7-621-849-00	SCREW (BV/RING)

The components identified by mark **△** or dotted line with mark **△** are critical for safety. Replace only with part number specified.

